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Two Crude Oil Price Advances Within Week Emphasize Steady Climb of the Industry

By JAMES McINTYRE

HIGHLY significant is the fact that the Tomball area in Harris County, Texas, appears to be out of consideration as a prospective great oil field. It is called the biggest disappointment in the history of Gulf Coastal exploration.

Opened in May of this year it gave such promise of greatness that millions of dollars have been invested in leases and operations, not only in the neighborhood of the discovery well, but in a wide scope of territory in the supposed trend of production. The story is told elsewhere in this edition.

Had this field been "another Conroe," as was confidently expected, it would have added to the difficulty of lowering the production of the United States—and expecially of Texas—to a level with crude oil demand.

The field, in the opinion of some geologists, may yet vindicate itself, but meanwhile the work of allocating the reduced production of oil in Texas will be made easier.

In the past week there have been two substantial increases in the price of crude oil, in all fields lying between the Pennsylvania grade fields and California, and one increase in the two divisions named. A general 25-cent increase in the fields on a gravity basis and a relatively large increase in fields on a flat basis heartened all producers who are further encouraged by the prospects of even better prices in the very near future.

The Administration in Washington, instead of pegging prices for the industry, has put it up to the oil business to work out its own salvation after giving it a lot of machinery to assist in the effort.

The industry is going slowly, but it is believed steadily on its way upward. The law has made it "tough for the hot oil artist" and the watch for illicit production and illicit marketing of oil and its products is so closely kept and the penalty is so severe that a violator may be put down as little else than a reckless fool.

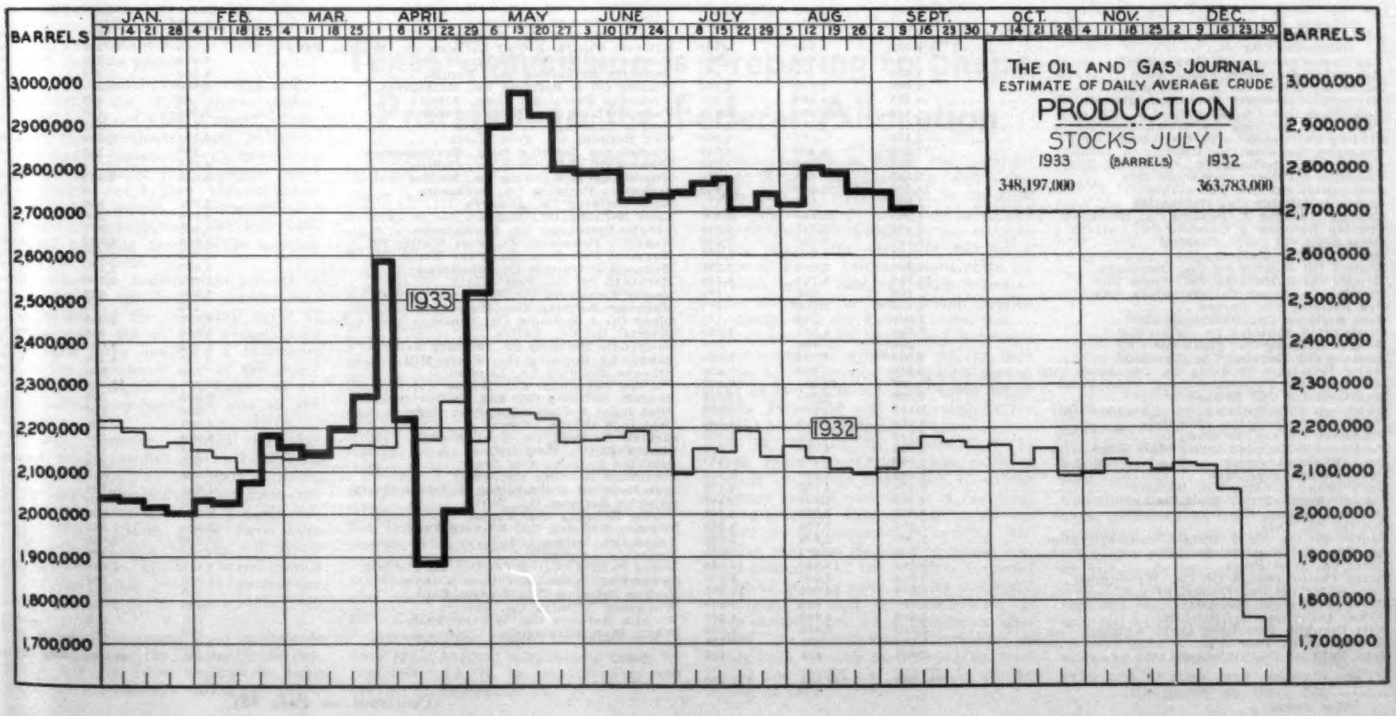
The Corporation Commission of Oklahoma and the Railroad Commission of Texas have fixed the allowables for the fields of the two states and with the system of checking producers, pipe lines, railroads, and trucks, and brokers and refiners, established by the Federal and State governments, we should have what we never have had: real proration, with no by-passing, no moonlighting, no bootlegging.

Crude Oil Production in the United States

Estimated daily average production for the week ending September 9, and a comparison with previous week and one year ago, follows:

	Sept. 9	Sept. 2	Sept. 10, 1932
Oklahoma—			
Oklahoma City	173,155	206,120	82,415
Seminole-St. Louis	128,315	131,340	106,545
Remainder of State	212,390	210,915	205,260
Total Oklahoma	513,860	548,375	394,220
East Texas—			
Lathrop	267,991	284,914	136,543
Kilgore	194,787	209,828	107,858
Joiner	173,780	188,376	111,161
Total East Texas	636,558	683,118	355,562
West Texas	161,937	160,452	170,417
North Central Texas	75,138	74,275	74,156
Texas Panhandle	44,565	48,120	47,363
East Central Texas	57,694	57,963	56,505
Gulf Coast—Texas	219,847	218,495	129,637
Southwest Texas	51,515	54,615	58,245
Total State of Texas	1,247,254	1,297,038	891,885
Kansas	127,375	129,720	96,530
North Louisiana	25,985	26,050	29,980
Gulf Coast—Louisiana	48,267	46,236	34,542
Arkansas	31,020	31,315	33,700
Eastern Fields	128,000	117,000	112,000
Rocky Mountain area	80,840	78,830	76,800
California—			
Santa Fe Springs	53,500	53,250	59,000
Long Beach	75,500	75,250	70,500
Playa Del Rey	10,900	11,000	14,500
Elwood	13,400	13,400	13,500
Kettleman Hills	63,250	64,250	59,500
Remainder of State	296,450	283,000	263,500
Total California	513,000	500,150	480,500
Total United States	2,715,601	2,774,714	2,150,157

Decrease 59,113 Bbls. Daily.



Refinery Runs in Mid-Continent Area Continue Upward Trend Which Began Last February

Crude runs to stills in the Mid-Continent territory will average 526,749 bbls. daily in September, according to figures obtained from the respective refining companies. This represents an increase of 8,239 bbls. over August, when the estimated daily runs were 518,510 bbls. It compares with the daily average of 430,430 bbls. in September, 1932, an increase of 96,319 bbls., and with 588,105 bbls. in the same month two years ago, a drop of 61,356 bbls. The September figures maintain the upward trend in refinery runs which began last February and has continued almost without interruption since then.

Declines in runs are recorded in two refining areas only, Kansas, with a drop of 1,550 bbls., and North Central Texas, with a drop of 1,891 bbls. In West Texas, where the August figures revealed a decrease of 2,195 bbls. from July, the September reports show a rise of 5,025 bbls. Crude runs in the Oklahoma district will exceed those of August by 4,260 bbls. daily. The Oklahoma runs, totaling 182,560 bbls., compare with 147,850 bbls. in September of 1932, a gain of 34,710 bbls. At this time last year the trend of operations was downward and the September runs showed a decline of 3,200 bbls. as compared with August.

Fifteen of the 55 refineries reported in the East Texas district are shut down. Notwithstanding this fact, the daily runs for September will average 1,195 bbls. more than in August, when a sharp recession from July, totaling about 25,000 bbls., was recorded. The August decrease was attributed to the crude shortage resulting from rigid enforcement of Federal regulations affecting interstate transportation of oil produced in violation of the state's proration law. To make up for the reduced supply of crude last month some East Texas refiners who had crude in storage drew upon this. The fact that the decline in runs to stills in this district has been halted and that an upturn now appears is taken as a further indication that the situation there, which has been the sorest spot on the oil map, is clearing up.

Not only are a half-dozen additional small refineries, built within recent months, now operating and accounting for part of the increased oil runs in East Texas, but larger and longer-established plants have enlarged their capacity and begun purchasing more oil. Among these latter is the East Texas Refining Co., which has increased its capacity from 10,000 bbls. to 12,000 bbls. daily, with a corresponding rise in its runs. The Tyler Refining Co. at Arp now has a daily capacity of 1,500 bbls. in place of 1,000 bbls. The Rusk Oil & Refining Co., formerly the Rusk County Refining Corp., has increased the capacity of its Overton plant from 1,000 bbls. to 3,000 bbls. daily, and its daily average runs for September will be 1,800 bbls. as compared with 700 bbls. in August. Other companies reporting increased refining capacity include the Canyon Refining Co., Kilgore; Carnation Refining Corp., Gladewater; Dutch Rose Refining Co., Gladewater; Locke Refining Co., Gladewater, and Upshur Refining Co., Gladewater. The Henderson Refining Co. plant, Henderson, whose daily runs to stills formerly ran around 10,000 bbls., is shut down. All the other larger plants in the district are operating.

In the North Central Texas district the Sinclair Refining Co.'s Fort Worth plant, which with a daily refining capacity of 5,000 bbls. was running about 3,000 bbls. earlier in the year, is shut down pending the installation of a new cracking unit. It was expected to be ready for resumption of operations late this month. No changes in operations of consequence are seen in the North Central Texas district.

The Octane Refining Co.'s plant near Chautauqua in North Central Texas is now equipped to receive 600 bbls. of shallow Callahan County crude daily through a small line which has been completed by the Sinclair Prairie Pipe Line Co.

A market for 1,200 bbls. of crude daily is expected to be provided by the Shamrock Oil & Gas Co.'s new skimming plant on the Pampa-Childress line of the Denver & Rio Grande Railroad just east of Lefors, in Gray County, West Texas. The company has acquired from the Bell Oil & Gas Co. 20 miles of gathering lines which afford connection with the Morse Pool in Gray County and these will be used in the operation of the new plant. It is announced that Ray L. Hill, of Ballinger, will soon begin operation of a 50-bbl. refinery recently completed at the eastern edge of Ballinger. The plant will operate on crude from the McMillan Pool in Runnels County, West Texas.

Mid-Continent Refinery Operations

Average Daily Crude Runs (Barrels)

(Based on estimates compiled first of each month by The Oil and Gas Journal)

	1929	1930	1931	1932	1933
January	508,550	535,460	478,795	405,910	399,405
February	506,800	519,355	470,125	411,280	407,125
March	514,950	531,500	449,634	401,155	423,445
April	530,530	555,250	497,391	419,750	441,000
May	577,500	574,300	510,540	436,160	470,460
June	583,030	572,250	567,915	440,765	479,987
July	565,800	548,475	588,840	433,255	525,845
August	555,250	526,400	590,545	427,710	518,510
September	552,300	498,710	588,105	430,430	526,749
October	544,720	518,800	472,190	401,995	.....
November	545,473	506,700	480,440	408,180	.....
December	540,630	478,360	456,525	416,275	.....

Operations by Refinery Districts

	Sept. 1 Dy. crude capacity	Sept. Dy. crude runs	August Dy. crude runs	Sept. Daily increase
Arkansas	37,250	21,750	21,650	100
Kansas	183,200	112,450	114,000	*1,550
North Louisiana	41,750	26,400	25,300	1,100
Oklahoma	304,300	182,560	178,300	4,260
North Central Texas	190,650	90,089	91,980	*1,891
West Texas	107,825	36,925	31,900	5,025
East Texas	114,700	56,575	55,380	1,195
Total United States	979,675	526,749	518,510	8,239

*Decrease.

REFINERY OPERATIONS IN OKLAHOMA
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Sept.	Aver. daily runs Aug.
Altitude Petroleum Corp. (J. H. Peacock Refining Co.), Oklahoma City	3,000	500	500
Anderson-Prichard Oil Corp., Cyril	6,000	4,000	4,000
Associated Petroleum Corp., Allen	3,000	(*)	(*)
Barnsdall Refineries, Inc., Barnsdall	4,000	3,700	3,500
Barnsdall Refineries, Inc., Okmulgee	10,000	4,500	5,000
Bell Oil & Gas Co., Grandfield	4,500	3,000	3,100
Black Gold Refining Co., Oklahoma City	2,500	1,500	1,750
Century Petroleum Corp., Oklahoma City	2,500	(*)	2,000
Champlin Refining Co., Enid	16,000	8,000	8,000
Cole (L. S.), Refining Co., Oklahoma City	400	300	200
Columbia Oil Corp., Oklahoma City	3,500	(*)	(*)
Continental Oil Co., Ponca City	30,000	26,000	22,500
Crescent Refining Co., Holdenville	1,000	(*)	(*)
Cushing Refining & Gasoline Co., Blackwell	1,700	1,500	1,800
Cushing Refining & Gasoline Co., Cushing	4,200	2,500	3,000
Deep Rock Oil Corp., Cushing	10,000	9,000	9,000
Enid Oil Co., Enid	5,000	2,500	3,000
Empire Oil & Refining Co., Okmulgee	4,000	2,800	2,700
Empire Oil & Refining Co., Ponca City	12,000	8,700	8,700
Firestone Refining Co., Oklahoma City	200	300	(*)
Fox Refining Co., Garber	5,000	3,000	(*)
Gem Refining Co., Oklahoma City	1,000	100	(*)
Globe Oil & Refining Co., Blackwell	7,500	6,500	7,000
Hanger Refining Co., Oklahoma City	500	300	(*)
Johnson Oil Refining Co., Cleveland	6,000	4,000	5,000
Major Petroleum Products Co., Oklahoma City	2,000	950	650
Mid-Continent Petroleum Corp., West Tulsa	40,000	20,000	20,000
Marathon Oil Co., Bristow	5,000	3,000	3,500
Oklahoma City Refining Co., Oklahoma City	2,500	100	100
Phillips Petroleum Co., Okmulgee	6,000	4,500	4,500
Producers Oil Co., Bristow	2,500	1,000	1,000
Producers & Refiners Corp., West Tulsa	6,000	4,000	4,000
Pure Oil Co., Ardmore	5,000	(*)	(*)
Pure Oil Co., Muskogee	9,000	8,800	8,800
Rock Island Refining Co., Beckett	6,000	4,200	4,450
Sinclair Refining Co., Sand Springs	8,000	2,400	2,400
Sterling Refining Co., Oklahoma City	3,500	2,500	2,000
Sun Oil Co., Yale	5,000	2,500	3,000
Sunray Oil Co. (C. E. Wright, receiver), Allen	7,000	2,500	2,600
Sunshine Refining Co., Seminole	500	(*)	(*)
Texas Co., West Tulsa	15,000	12,000	12,000
Texas Pacific Coal & Oil Co., Wynnewood	3,000	3,000	1,500
Tide Water Oil Co., Drumright	15,000	10,000	10,000
Western Oil Corp., Beckett	2,000	600	400
Wilcox Oil & Gas Co., Bristow	5,000	4,000	4,000
Wirt Franklin Petroleum Corp., Ardmore	4,000	2,330	2,000
Yale Oil Corp., Yale	2,000	500	350
York Refining Co., Oklahoma City	2,000	400	400
Total	304,300	182,560	178,300

*Shut down.

REFINERY OPERATIONS IN NORTH CENTRAL TEXAS (INCLUDING PANHANDLE)
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Sept.	Aver. daily runs Aug.
Archer Refining Co., Megargel	1,500	400	400
Atlantic, Pacific & Gulf Refining Co., Wichita Falls	5,000	300	300
Continental Oil Co., Wichita Falls	6,000	4,000	4,500
Danciger Refineries, Inc., Pampa	6,500	5,000	4,500
Empire Oil & Refining Co., Gainesville	5,000	3,500	3,400
Exchange Petroleum Corp., Albany	500	200	200
Falls Refining Co., Wichita Falls	2,000	450	700
Gratex Refining Co., Graham	500	125	130
Gulf Refining Co., Fort Worth	10,000	6,000	6,000
Haskell Oil Refining Corp., Breckenridge	200	100	100
Humble Oil & Refining Co., Chilton	4,000	(*)	(*)
Humble Oil & Refining Co., Neches	5,000	2,450	2,300
Jacksboro Refining Co., Jacksboro	50	10	35
Kent Refining Co., Minerva	2,000	250	250
Kent Refining Co., Angus	4,000	250	290
LaSalle Petroleum Co., Burkburnett	3,500	300	270
Magnolia Petroleum Co., Fort Worth, No. 1	12,000	4,643	5,500
Magnolia Petroleum Co., Fort Worth, No. 2	4,000	2,427	1,700
Magnolia Petroleum Co., Corsicana	5,000	2,673	3,200
Marathon Oil Co., Fort Worth	5,000	3,500	4,000
Master Petroleum Co., Waco	1,000	500	500
Muenster Refining Co., Muenster	300	30	35
Olney Oil & Refining Co., Olney	3,000	2,000	2,000
Oriental Oil Co., Dallas	5,000	855	1,200
Panhandle Refining Co., Wichita Falls	5,000	3,000	3,000
Panhandle Refining Co., Kings Mill	2,000	1,300	1,300
Paragon Refining Co., Leuders	300	200	200
Phillips Petroleum Co., Borger	30,000	19,000	20,000
Phoenix Refining Co., Inc., Dallas	3,000	500	500
Pilot Point Refining Co., Pilot Point	500	300	300
Shamrock Oil Co., Sunray	4,000	600	600
Sinclair Refining Co., Fort Worth	5,000	(*)	(*)
Simms Oil Co., West Dallas	4,500	(*)	(*)
Southtex Refining Co., Trent	500	200	200
Southland Refining Co., Olney	1,000	885	200
Star Refining & Producing Co., Fort Worth	1,500	500	600
Superior Refining Co., Tiffin	500	50	50
Taylor Refining Co., Taylor	6,000	800	800
Taxman Refining Co., Wichita Falls	3,000	1,940	2,400
Texas Co., Dallas	16,000	12,000	12,000
Texas Co., Amarillo	4,000	2,500	2,500
Texas Pacific Coal & Oil Co., Fort Worth	3,000	2,000	2,000
Texas Pacific Coal & Oil Co., Caddo	1,000	700	700
Tucker Refining Co., Wichita Falls	200	140	75
Waggoner Refining Co., Electra	6,000	3,350	3,000
Wichita Refining Co., Wichita Falls	150	(*)	(*)
White Star Refining Co., Cisco	500	150	150
Total	190,650	90,089	91,980

*Shut down.

(Continued on Page 38)

No Oil Price Fixing by the Government Now; Section Remains in Code, but Inoperative

By CHARLES E. KERN
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Sept. 12.—The price fixing section remains in the oil code but will be inoperative for the present, pending demonstration of the effects of balancing production with consumption on the price structure.

The increases announced during the week, in both crude and gasoline, are taken as evidence of the approach to balance in production and the administration is apparently anxious to avoid governmental price fixing, if at all possible.

This was the net result of the conference held with President Roosevelt yesterday by Secretary Ickes, oil administrator, Gen. Hugh S. Johnson, NRA administrator, and the three government representatives on the planning and co-ordinating committee; M. L. Benedum and D. R. Richberg, counsel for the NRA, and Charles Fahy, Norman Meyers and Howard Marshall, legal advisors of the oil administrator.

Price Regulation Retained

Secretary Ickes announced upon leaving the White House that the price regulation section of the code would be retained but that it would not be applied unless found necessary. He indicated that the President had affirmed his position that application of the government price fixing powers be deferred until a sufficient test can be given the effect of strict production control upon crude and refined products.

Meanwhile, pressure for early price control continued from its supporters who were still hopeful there will be an early change in the position of the administration upon this question despite a move on the part of the consumers board of the NRA today to block fixing of retail gasoline prices.

In a memorandum to Secretary Ickes, shortly before the White House conference, Mrs. Charles Cary Rumsey, chairman of the consumers board, declared:

"Persuasive representations have been made to this board that uniform retail price fixing would hurt the consumer and the development of more efficient methods of distribution, without contributing anything basic to the solution of the oil problem."

She asked the Secretary to present to the conference the board's request that "no decision to fix the retail price of gasoline under the oil code authority be made until there has been a full hearing of the consumers' side of the case."

The recent increases in prices of retail gasoline occasioned the protest, she explained.

It was, however, pointed out that though retail gasoline prices have been increased as much as 2½ cents a gallon, particularly in the Midwest, a corresponding price increase for crude has not followed. While crude prices have been raised substantially, they are still below the approximate $1.12 a barrel which the administration hopes to secure and have not risen at an equal ratio with gasoline prices.

Some proposed amendments to the code were discussed at the White House conference but Mr. Ickes declined to make public the amendments which are understood to have been approved by the President, although he promised an announcement within a "day or two." He said that consideration has been given to the creation of the regional groups to aid in the administration of the code, and that action would probably be taken within a short time.

While the conference was in session, the 12 industry members of the Planning and Co-ordinating Committee were meeting, and late in the day Mr. Fahy, representing Secretary Ickes, reported to the group in executive session the outcome of the conference. Members of the committee declined to comment on the report.

The committee spent the day at work upon production and refinery cost figures, which the majority members supporting price fixing feel should be ready for immediate use in event the administration determines to proceed with NRA price regulation authority.

The Planning and Co-ordinating Committee has appointed a number of subcommittee to have charge of the various subjects to be considered:

Subcommittees Named

Statistics: Axtell J. Byles, president, American Petroleum Institute, chairman; Fred Van Covern, American Petroleum Institute, New York; A. J. McIntosh, Socony-Vacuum Corp.; E. V. Salisbury, Standard Oil Co. (New Jersey), New York; Oliver S. Ambrose, Tide Water Associated Oil Co., New York.

Production: Wirt Franklin, president, Independent Petroleum Association of America, Oklahoma City, Okla., chairman; E. B. Reeser, president, Barnsdall Corp., Tulsa; Charles F. Roeser, independent producer, Fort Worth, Tex.; Marvin Lee, geologist, Wichita, Kans.; William C. McDuffie, receiver for Richfield Oil Co., Los Angeles, Calif.

Refinery: Howard Bennette, president, Western Petroleum Refiners Association, Tulsa, chairman; Fayette B. Dow, eastern division, National Petroleum Association, Washington, D. C.; C. B. Watson, central division, Chicago, Pure Oil Co.; Will J. Reid, western division, Los Angeles, Calif., Hancock Oil Co.; R. R. Irwin, Mid-Continent division, Tulsa, White Eagle Co.

Marketing: C. E. Arnott, president, Socony-Vacuum Corp., New York, chairman; Allan Jackson, Standard Oil Co. (Indiana), Chicago; Will Dodge, Texas Co., New York; C. L. Jones, Socony-Vacuum Corp., New York; Paul Hadlick, National Oil Marketers Association, Washington, D. C.

Accounting: Ralph T. Zook, president, Pennsylvania Grade Crude Oil Association, Bradford, Pa., chairman. (Members not yet nominated.)

Labor: W. T. Holliday, president, Standard Oil Co. of Ohio, Cleveland, Ohio, chairman; B. L. Majewski, Illinois Marketers Association, Chicago; H. Riedemann, Standard Oil Co. (New Jersey), New York; Harry F. Glair, Standard Oil Co. (Indiana), Chicago; P. W. Thirtle, Sinclair Co., New York.

Adjustment and Interpretation: Amos L. Beaty, general counsel, Phillips Petroleum Co., New York, chairman; B. L. Majewski, Illinois Marketers Association, Chicago; S. W. Hayes, independent producer and attorney, Oklahoma City, Okla.; Grant Stanford, Sinclair Co., New York; Louis Titus, independent producer and attorney, Washington, D. C.

Transportation: E. B. Reeser, president, Barnsdall Corp., Tulsa, chairman; W. T. Holliday, president, Standard Oil Co. of Ohio, Cleveland, Ohio; D. J. Moran, president, Continental Oil Co., Ponca City, Okla.; Roy B. Jones, president, Panhandle Refining Co., Wichita Falls, Tex.; Douglas Bushnell, president, Pipe Line Association, New York.

Finance: H. M. Dawes, president, Pure Oil Co., Chicago, chairman; W. F. Humphrey, president, Tide Water Associated Oil Co., Los Angeles, Calif.; William G. Skelly, president, Skelly Oil Co., Tulsa; H. F. Sinclair, president, Consolidated Oil Co., New York; the treasurer of the planning and co-ordination committee to be elected.

Statement by Committee

The planning and co-ordination committee has issued the following statement:

"To keep the motorist's gasoline price down and at the same time to protect the small producer, refiners and dealers from heavy losses due to greatly increased labor costs is a difficult task faced by the planning and co-ordination committee on the petroleum code which is completing its studies on costs and prices before recommending to Administrator Ickes any action on price determination.

"The petroleum industry is the key industry of the nation, intimately affecting every family throughout the country and its early recovery through the code will give new impetus to all branches of business, if the flood of telegrams received by the committee daily means anything. Realizing this, the planning and co-ordination committee is in continuous session to provide a working arrangement under code, not only to enable the industry to recover from its own depression, provide new employment and meet the higher wage scale under the code, but also to increase the market for its products through prevention of excessive price increase.

"The committee is in accord on the basic principles set forth in the code, but finds it necessary to work out these principles in detail for the various sections of the country and branches of the industry before authorizing any public utterance on questions so important to the public and to the industry. It is rapidly completing this phase of its task.

"The committee is anxious that all those affected by the code or interested in its successful operation shall have an opportunity to present whatever information or suggestions they may have. To that end, committees will be appointed in order that full hearings may be given to all concerned. Telegrams and letters from all over the country indicate the desire of the industry to know exactly what should be done to make the code most effective. The few instances of deliberate violations which have been reported only emphasize the general acceptance of the code."

Industry Policing Itself

The Planning and Co-ordinating Committee also issued the following statement:

"The petroleum industry is policing itself under the new code for the industry. Racketeers and violators are being reported to this committee by those who are helping as well as hoping to make the code effective. Documentary evidence, sometimes backed up by photographs, has been presented to the committee in a number of cases which will be handled by the proper subcommittees. With hundreds of thousands of men in the industry watching the 'chiselers,' it seems unlikely that any important violations of the code will fail to be reported.

"The general desire to fully comply with the provisions of the code is further evidenced by the many requests for in-

(Continued on Page 30)

Texas Commission Is Preparing to Shape Proration to the Federal Allocation

AUSTIN, Tex., Sept. 11.—The Texas Railroad Commission, oil and gas supervisory agency of the State, has begun a long series of preparations to shape state proration to the new Federal oil authority.

The commission temporarily ordered the state allowable production cut from 1,200,000 bbls. to the first Federal order of 975,200 bbls. daily, effective from Friday, September 8. A reduction of 25 per cent will be taken from the output of each field, the commission announced. Marginal wells are excepted. It had already called a hearing for September 16, earliest day under the 10-day notice law, for future state allowable regulations.

Friday it called on pipe lines to submit purchasers' nominations for the quantities of oil each expects to take from the Texas fields during the next several months. This market demand phase of a former law was invoked to guide the commission in considering field allowables and the protection of all producers in getting outlets for oil.

The commission asked the pipe lines to have their buyers' nominations ready by September 14, to be considered at the hearing on September 16.

Chairman Lon A. Smith and Commissioner Ernest O. Thompson and Commissioner C. V. Terrell went to the East Texas Field for an inspection trip, and conferences with producers as to procedure during the eight-day run of a technical hiatus before revised state allowable figures could be made effective under terms of the law, though applied to comply with the Federal restriction.

Chairman Smith announced indefinite postponement of a hearing set for September 11 at Houston to consider regulations in the Thompson and Rabbs Ridge Fields. This field will be covered by the general hearing September 16.

A. W. Walker, Jr., president of the Texas Petroleum Council, has called a meeting in Austin September 15 of the directors and all committees of the council, to consider the matters to be reviewed in the commission hearing. Mr. Walker said also the meeting would consider assistance of the industry in prosecution of penalty suits filed by the State, involving, he said, over $9,000,000 in fines claimed due for violations of state orders. The council also will consider offering cash rewards for information leading to the arrest and conviction of violators, he said.

Crude Oil Price Stepping Upward in Industry's Effort to Reach Position of General Profit

By JAMES McINTYRE

The past week was a red letter in the life of the oil industry with two price increases in all the fields between the Pennsylvania Grade fields and California, and with one general price increase in the Eastern and the California fields.

In the Mid-Continent fields on September 5, the Continental Oil Co. led the way with a 20-cent increase over its own prices and a 10-cent increase over the postings of nearly all the other buyers in Oklahoma, Kansas and Mid-Continent Texas. This brought the price up to an 82-cent top for 40 gravity crude and 74 cents for 36 gravity crude. Every company met the advance and it was followed by increases in all the oil-producing states.

But the industry had not got through discussing it when the Stanolind Crude Oil Purchasing Co. announced a further 15-cent increase, making the top price for Kansas and Oklahoma crude 97 cents per barrel and 36 gravity 89 cents per barrel. This was followed by another general increase in prices. It put a top price of 92 cents in North and Central Texas, and East Central Texas; 97 cents top in the Van Field; 90 cents in East Texas; a top price of 76 cents in Gray County, Texas Panhandle; and 71 cents in Carson, Hutchinson and Moore Counties. It put a top price of $1.00 in the Conroe Field, Texas, and a top of 97 cents in Salt Creek, Wyoming. Three different schedules of the Humble, Texas and Sun companies put a top price of 99 cents, $1.01 and $1.09, respectively, in the Gulf Coast. In the North Louisiana and Arkansas Fields, the Standard's top prices range from 93 to 99 cents, according to pools, but other companies posted a top price of 92 cents. In each case the top price mentioned represents the price for oil of 40 degrees and above.

Increases in Flat Price Fields

In West Texas and in Southwest Texas every field benefited by the two price increases. The September 8 schedule, which was initiated by the Humble Oil & Refining Co. puts Saxet crude at 75 cents per barrel; Refugio heavy, 75 cents; Mirando, 70 cents; Pettus, 95 cents; Salt Flat, 77 cents; Darst Creek, 77 cents; and Tomball, $1.05; Greta, 75 cents; Lytton Springs, 70 cents; Luling, 65 cents; Duval County, 70 cents; Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Pecos and Winkler crudes, 60 cents; Lea County, New Mexico, 60 cents; Smackover, Ark., 60 cents. These fields are all on a flat price basis.

The Rocky Mountain fields were given appreciable increases by the Stanolind Oil & Gas Co., Ohio Oil Co., and Continental Oil Co., and notwithstanding that its production has very materially increased in the past two weeks due to big new wells, the Midland Field in Michigan is now posted at 90 cents per barrel by the Pure Oil Co.

Californians Given Better Prices

On September 5, the Standard Oil Co. increased its prices in all fields on the Pacific Coast. A 5-cent increase in the low gravity fields and about 15 cents in the high gravity fields with variable advances in others, indicate the extent of the better prices in that part of the country where 36 gravity oil brings from $1.12 to $1.36 per barrel and oil of 22 gravity commands a higher price than 36 gravity oil gets in the Mid-Continent fields. All the other California oil purchasers followed the lead of the Standard Oil Co.

Great Increase in Oil Value

When, in the early part of May, East Texas operators went completely off their base and opened their wells to the limit of pipe line and railroad capacity, the crude oil market dropped to an average of 25 cents a barrel in Kansas, Oklahoma, Texas, Arkansas and Louisiana. In the week ending May 20, with production in East Texas at 1,020,340 bbls., and the production of the five states named 2,265,120 bbls. per day producers in the five states received $566,478 for their daily production.

Now with production in the same five states down to 2,093,761 bbls. producers are receiving around $1,779,697 or about 85 cents per barrel for their daily production.

The amount received now seems to be out of proportion to the amount received in the middle of May, with a difference of less than 200,000 bbls. per day in production, but in the middle of May there was no telling how long the East Texas madness would keep up, and buyers were frightened, while now there is promise of a much reduced production brought down to what is hoped to be a balance with demand.

The blundering action of East Texas producers responsible for the 1,000,000-bbl. a day orgy of last May affected every field in the United States. It lowered the price of Pennsylvania grade crude oil; of Kentucky, Ohio, Indiana and Michigan oil; of Rocky Mountain oil and was felt even in California.

Bradford and Allegany crude oil, now quoted at $2.35 per barrel, fell in May to $1.37 per barrel. Warren, Venango-Clarion and Butler County oil now quoted at $2.25 per barrel fell to $1.30; southwest Pennsylvania oil, which now brings $2.12 was then bought for $1.07; southeastern Ohio oil which fell in May to 90 cents has come back to $1.92 while West Virginia crude which slumped to $1.02 is now quoted at $2.07.

Steps Upward

The recent price increases, while highly gratifying to producers who have for a long time done business without profit, and in many cases at a loss, are believed to be only steps which the industry is climbing to reach a position of profit for all departments. In the 74 years of the oil business the average price of crude has been about $1.25 per barrel. We have not yet reached the all-time average in the recent upward climb but before the end of the next two weeks the industry is expected to have so shaped its course that a price of $1 per barrel for 36 gravity crude oil will be reached.

Cleaning and Deepening Wells in Yates Pool by Use of Special Small Rotary Outfit

By L. G. E. BIGNELL
Petroleum Engineering Editor

Some of the oil wells owned by the Mid-Kansas Oil & Gas Co. in the Yates Pool, Pecos County, Texas, needed cleaning and deepening. As they are under pressure, in fact, some of them were actually producing when the cleanout work was done, it was necessary to develop some type of rotary device that could be used under those conditions. It was decided that the use of cable tool cleanout string was not practical and the ordinary rotary outfit did not suit the condition either.

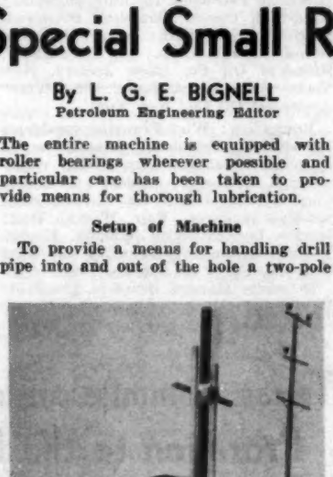
M. E. Wagner, general superintendent of production for the Mid-Kansas Oil & Gas Co., took this problem under consideration and outlined to Frank Redick, master mechanic in charge of the shop at Iraan, Tex., his ideas of a device that could be built that would be suitable for their requirements. As a result of this conference the piece of equipment shown in the accompanying cut was built at the Iraan shops and has been used quite satisfactorily in cleaning out and deepening several wells in the Yates Pool.

The rotary outfit is powered through a drive shaft that is shown extending to the left in the picture. This shaft is driven through gears by the motor on the truck or tractor and its power is transmitted to the turntable through a vertical jack-shaft. At the well end of the drive shaft there is a sprocket and by means of a chain running over it the power is transmitted to an upper sprocket and to the turntable. This chain is housed in a steel guard that also serves to space and support the upper portion of the outfit. The principle function of the jack-shaft is to keep the drive shaft at a reasonable height above the ground. The jack-shaft is clamped to the well casing immediately below the upper Cameron blowout preventer.

The rotary turntable is supported on an adapter that screws directly into the top of the Cameron blowout preventer. This adapter is provided with a roller bearing in the upper part and upon this bearing the turntable rests and rotates. The entire machine is equipped with roller bearings wherever possible and particular care has been taken to provide means for thorough lubrication.

Setup of Machine

To provide a means for handling drill pipe into and out of the hole a two-pole



Portable rotary outfit used by Mid-Kansas Oil and Gas Co. in cleaning out and deepening wells in Yates pool, Pecos County, Tex.

60-foot mast is erected at the well and properly guyed. On this mast a working platform is mounted in a position above the top of the turntable for the driller. This is practically the same outfit used in running tubing in the wells under pressure. In fact, in cleaning out and deepening the first well a string of 2½-inch tubing was used for drill pipe but on later work regular 2⅞-inch drill pipe was used.

A regular 6⅛-inch rock bit is used and this and the drill pipe is lubricated into the hole by using the two Cameron blowout preventers. The practice followed in running in or coming out is the same as used in running tubing under pressure.

On the top of the turntable are two upright steel bars and between them is mounted a drill pipe clamp with a horizontal driving stem. When the turntable is rotated the drill pipe will feed into the hole about 2 feet to the run. When the clamp and driving bar has moved downward the full length of the two upright driving stakes the clamp is moved up and a new hitch is taken on the drill pipe and another 2-foot run is made.

To remove the cuttings from the hole oil is circulated under pressure through the drill pipe for a time and then the well is blown into the trap or tank periodically. By this method it is possible to keep the hole free of cuttings without waste of oil or gas.

To operate the circulating or slush pump gas from the well under about 500 pounds pressure is used. As there is plenty of gas available at the well this nicely solves the problem of providing power for the pump.

The whole operation is performed by two men and the first well at which it was used was cleaned out for about 20 feet and then drilled about 10 feet deeper without trouble. Being portable and easily set up and taken down this outfit offers many possibilities in other fields with a few adjustments necessitated by conditions at the well being cleaned.

To tie the rotary outfit down four eyes are provided, one on each end of the frame enclosing the turntable and wire lines run to the sills supporting the mast legs.

The whole device is very ingenious and is being used by the Mid-Kansas Oil &

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Tomball Being Written Down as Disappointment; Millions Spent in Hope of Another Conroe

By NEIL WILLIAMS
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Sept. 11.—Tomball now is being written down as one of the biggest disappointments which has ever been experienced on the Gulf Coast. Until recently the focal spot in one of the most sensational leasing, royalty and wildcatting plays on record, it seems to have faded from the picture as having prospects of becoming of major importance from a production standpoint. Since the discovery of first production on May 27, the consequent development has revealed considerable information concerning conditions which are not conducive of a large or highly prolific field. Although production is only three months old and only nine wells have been completed it looks as though the confines of the pool already have been pretty well determined.

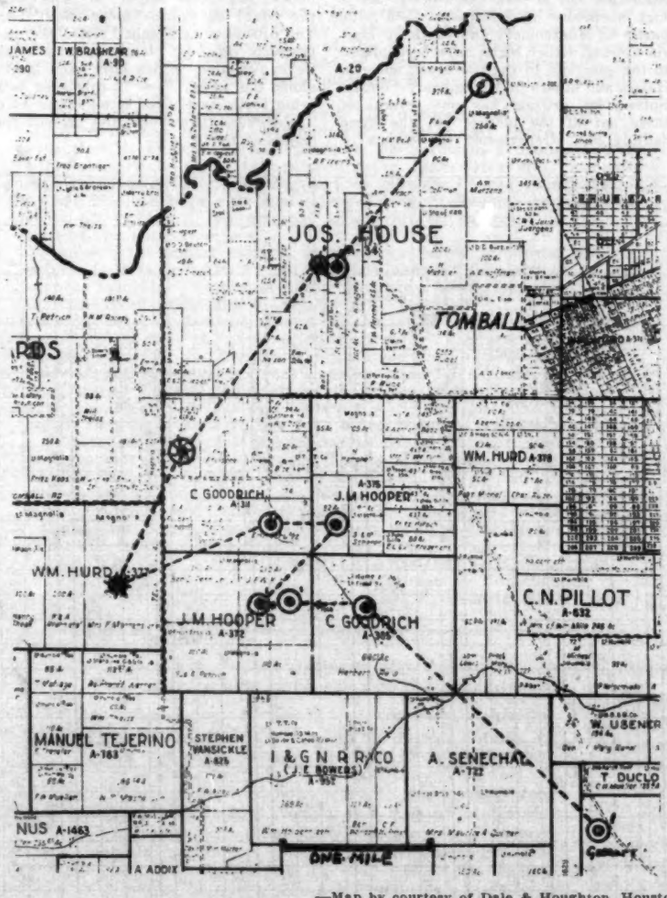
Millions of dollars have been spent in the Tomball-Huffsmith district in anticipation of the proving up of a field of extensive proportions. During the peak of the play, values placed on leases and royalties exceeded by far anything ever paid before for wildcat acreage. Buying spread over a wide territory across northern Harris and southern Montgomery Counties with nearly all companies, large and small, independent operators and others competing for representation in the area. Considerable geophysical work has been done, both before and since the active leasing got under way, and this with the drilling of a half dozen or more deep dry holes in the exploration for the oil pool has swelled the total cost materially.

Since the discovery of oil three pipe lines have been laid from the field, two of which were put in before the completion of a couple of wells, and as yet, with the third line in, no sizable production has materialized. Storage facilities and pump stations have been provided; modern camps have been laid out and constructed, and wide and well graded road systems have been cut through the area. All of this has been done in preparation for a large scale development program and on the strength of future major production.

Intensive Play

From the beginning of the intensive leasing activity and before a drop of oil had been found, the area was played for a proven field, even to the extent that a special hearing was held by the Railroad Commission to consider proration and drilling restrictions. The finding of oil was taken only as a routine step in the natural order of events in the development of the field. The drilling of the series of deep dry tests scattered over the area before the completion of the discovery well did not kill the interest in the prospect for oil. General opinion was that a field existed somewhere in the district and that it was just a matter of finding the right spot.

This opinion, however, was not without foundation and if Tomball does turn out a complete disappointment the play cannot be construed as a matter of error of judgment on the part of those figuring in it. The odds were greatly on the side of the proving up of a good field and there probably never had been a more perfect or ideal setup for one than right there. The district had been looked upon with suspicion since the earlier days of Gulf Coast development and a number of shallow tests had been drilled at various times. All geophysical work had checked the existence of some kind of an irregularity, either a deeply seated salt mass, structural high or other conditions favorable for the entrapment of oil. The gas showings encountered in the Cockfield, the producing horizon at Conroe, by a wildcat drilled late last year by the Indian Hill Oil Co. were not to be passed off lightly. This wildcat, whose showings were the incentive for the active lease play, was located some 5 miles and more northeast of the present production. Considering the geophysical findings and other favorable indications backed up by sizable gas showings in a horizon which had been proved very prolific at Conroe, and being directly in the line of active play within 20 miles of the latter field, which initiated the play, the Tomball district looked particularly attractive to everyone.



—Map by courtesy of Dale & Houghton, Houston.

Map of Tomball Field showing completed wells and sequence in which they appear in accompanying chart

No Geophysical Failure

The disappointment at Tomball cannot be attributed to any failure in geophysics. The proving up of the structure is sufficient vindication of the modern, scientific methods of exploration on the Gulf Coast. It has been very evident that a structure covering considerable area exists. Naturally, however, the physical characteristics concerning the reservoir and conditions concerning the structure could not have been determined before drilling. Development to date has brought out at least one very definite feature concerning the reservoir, that being the absence of important or uniform sand bodies above the water level and below the gas-oil contact. It seems to be true that whatever structure there is has not been uplifted enough to place much more than the top out of the water.

Also of particular concern is the fact that the interval between the water and the gas-oil contact is very narrow. The water level has been fairly definitely established as being around minus 5,391 feet with the gas-oil contact at minus 5,344 to 5,360 feet. This is a margin of only 31 to 47 feet which is very little to play on considering the poor sand condition.

Sand Conditions

Sands at Tomball are streaked with very little continuity between wells. There is no solid sand section as at Conroe and no regularity as to where the sand streaks are encountered in the horizon. In the horizon from the top of the Cockfield, in which the sands are encountered, it has been calculated that sands average 1 foot to every 3 feet drilled. Not all sands encountered carry gas or oil.

The top of the Cockfield ranges from minus 4,982 feet, in the highest well to date, to minus 5,177 feet, in the lowest, exclusive of tests outside the productive area. The high well (Humble Oil & Refining Co.'s No. 1 Doege) and the low well (Humble's No. 1 Reid) are a little less than a mile apart. Considering the high well, the oil pay section is encountered approximately 362 feet below the top of the Cockfield. It so happened there were no oil bearing sands of consequence in the oil section between the gas contact and the water level and the well was set in the gas cap and completed as a gas well.

Because of the narrowness of the interval between the gas cap and the water level, these points are watched with more than usual care by operators, the whole outcome of a well hinging very closely on the point at which the casing is seated and on the depth of bottom of the hole. It has been found that wells in which the casing seat is above the gas-oil contact turn out strictly gas wells and wells with bottom on or below the water level point of minus 5,391 feet make water. It therefore is necessary, if an oil well is to be completed that the casing point and the bottom be between minus 5,344 feet and minus 5,391 feet. In wells, in which no sands are encountered between those points, casing can be set up in the gas cap to complete the wells as gassers.

Shown by Completions

In an accompanying chart conditions in the Tomball Field are pictured clearly as shown by all the wells completed to date, including six oil wells, three gassers and two outside wells which encountered the sands below the water level. The gas wells are Magnolia Petroleum Co.'s No. 1 Rudel, Humble Oil & Refining Co.'s No. 1 Doege and No. 1 G. W. H. Martens. The Rudel well, second well in the field and located approximately 1½ miles northeast of the discovery well (Magnolia's No. 1 J. F. Kobs), first was completed at a total depth of minus 5,322 feet with 7-inch casing seated and cemented at minus 5,235 feet. All sands taken in were entirely in the gas horizon. The hole later was deepened with a view toward picking up the lower oil pay, drilling to a total depth of minus 5,404 feet where it was in the water. Encountering no oil sands of importance in the oil section it plugged to minus 5,348 feet where with string of 5-inch liner run to 5,533 feet again was completed as a gas well. The Doege well drilled only to minus 5,386 feet was still above the water but having no important sands in the oil interval seated its string of 7-inch casing at minus 5,230 feet, well up in the gas zone and made a gasser. The G. W. H. Martens also failed to pick up enough sand in the oil zone to make an oil well and so was completed as a gasser with 7-inch casing seated well up in the gas cap. It, however, drilled through the oil section into the water to a total depth of minus 5,398 feet and made some water on completion. Due to the fact it had a little oil sand it is making some distillate.

On the chart it will be noted that Humble's No. 1 Bloecher was completed as an oil well although its string of casing was set up in the gas cap minus 5,315 feet. This is explained in that a string of tubing was run down into the oil section to just above the water level and the well is producing through it.

Of Particular Interest

Of particular interest is Continental Oil Co.'s No. 1 Petrick, a direct east

offset to Magnolia's Rudel gasser. The Petrick well with sands in the oil section cemented its casing down in that section at minus 5,365 feet and with bottom at minus 5,385 feet, 6 feet above the water, made one of the best producers in the field. Humble's No. 1 Schultz, which was completed similar to the Petrick well, also made a good producer. Neither the Petrick nor the Schultz well found sands at the top of the pay section which accounts for their casing seats being well down in the pay section.

Magnolia Petroleum Co. and Humble's No. 1 J. W. F. Kobs (discovery well), was completed above the water level with bottom at minus 5,387 feet but has been making some water. This is believed due possibly either to a connection with its west offset (No. 1 Fritz Kobs) which was completed below the water level, or to some coning effect, although the well has been choked down ever since it was brought in. Humble's Reid producer, the most easterly of the wells, also was completed a little below the water level and is making some water.

In every instance the casing seats have been determined by the tops of the first sands.

The outpost wells, Magnolia Petroleum Co.'s No. 1 Martens, a mile northeast of production, and Humble's No. 1 Gebhart, are a mile southeast of the field. Both of these tests found all the sands below the water. The Martens well was drilled to a total depth of minus 7,245 feet and abandoned. The Gebhart well at latest report was still drilling but was down below 5,900 feet.

Real Pool Not Tapped?

According to many geologists and students of the conditions it is not entirely impossible that the real Tomball production has not been tapped by the present pool. While this pool has been a disappointment it could be true that this is just a small local high and that a main high or other local high spots more prolific are yet to be drilled. In the geophysical exploration all work checked on there being something out of the ordinary in the district but hardly two companies pick the same spot for the high. The first geophysics dated back to 1927 and 1928 when the former Vacuum Oil Co. (now a part of the Magnolia Petroleum Co.) outlined by torsion balance what was believed to have been a salt dome with the apex approximately where the discovery well in the J. N. Hooper Survey was drilled. A short time later the same company with seismograph got a salt lead several miles to the north about where Magnolia's deep dry hole on the Martens tract in the Joseph House Survey was recently drilled and abandoned. Vacuum leased approximately 10,000 acres on these discoveries. After the play got under way following the showings encountered in the Indian Hill wildcat last October Humble Oil & Refining Co. shot all around the district with reflection machines and picked a high spot south and west of the Magnolia block. Stanolind Oil & Gas Co. worked out a high northwest of the present field lying partly in Montgomery and partly in Harris County. Other highs have been placed to the east and to the northeast, some in Harris and others in Montgomery County. Subsequent drilling has put several of these out of the picture but the same drilling has strengthened the claims of others. Although the Indian Hill wildcat apparently is cut off from the present field by a low dry test, it is conceded by everyone that the showings encountered by that well are indicative of something, whether it be an entirely separate pool or whether there is some roundabout connection either with the present Tomball production or with some of the other supposed highs.

Interest Cooled

However, despite all this prospect for further development with the possibility that a more important field may yet be found, the unfavorable conditions revealed in the proving up of the present pool have been sufficient to cool off the interest once attached to the district. In this there is brought home forcibly the fact that such fields as Conroe are not found every day. At the time the Tomball play started Conroe was at its peak of activity and had made a name for its self as being the Gulf Coast's greatest oil field. That field, representing a new type of production for the coast in a horizon which had been prospected but very little up to that time, initiated a trend of play through a strip of virgin country fringing the inland side of the salt dome district and created a lot of hopes that there might be more fields the equal of Conroe along that trend. The prospects at Tomball fitted the most perfectly into the picture of any of the fields and areas which have been located along the trend. Now if this area is to bring forth its Conroe it will have to do it elsewhere than where the present pool has been found.

Los Angeles Plans Fight for Three-Way Tax Split

LOS ANGELES, Calif., Sept. 11.—Los Angeles, through members of the city council, engineering department and city planning commission, will make a fight to obtain a three-way state-county-city split of gasoline tax funds. The city council approved expense appropriations to send a delegation of three members; four members of the engineering staff and a representative of the planning body to the convention at Santa Cruz, of the League of California Municipalities.

Councilman George W. C. Baker informed his colleagues that the principal purpose of the representation would be to give impetus to a plan to place the three-way division of the gasoline tax funds before the electorate at the next general election.

His resolution calling for the delegation's attendance declared the city of Los Angeles would derive about $3,400,000 annually from such a division, in lieu of the $850,000 to be received this year as the result of the amendment to tax laws.

At present, municipalities are dependent upon allocations made by their county boards of supervisors. Mr. Baker explained that if the money were awarded directly to the city, street maintenance forces could be maintained without requests from supervisorial boards.

It is proposed that the State, county and municipality each get 1 cent of the 3-cent per gallon collected in taxes, based upon the point of sale.

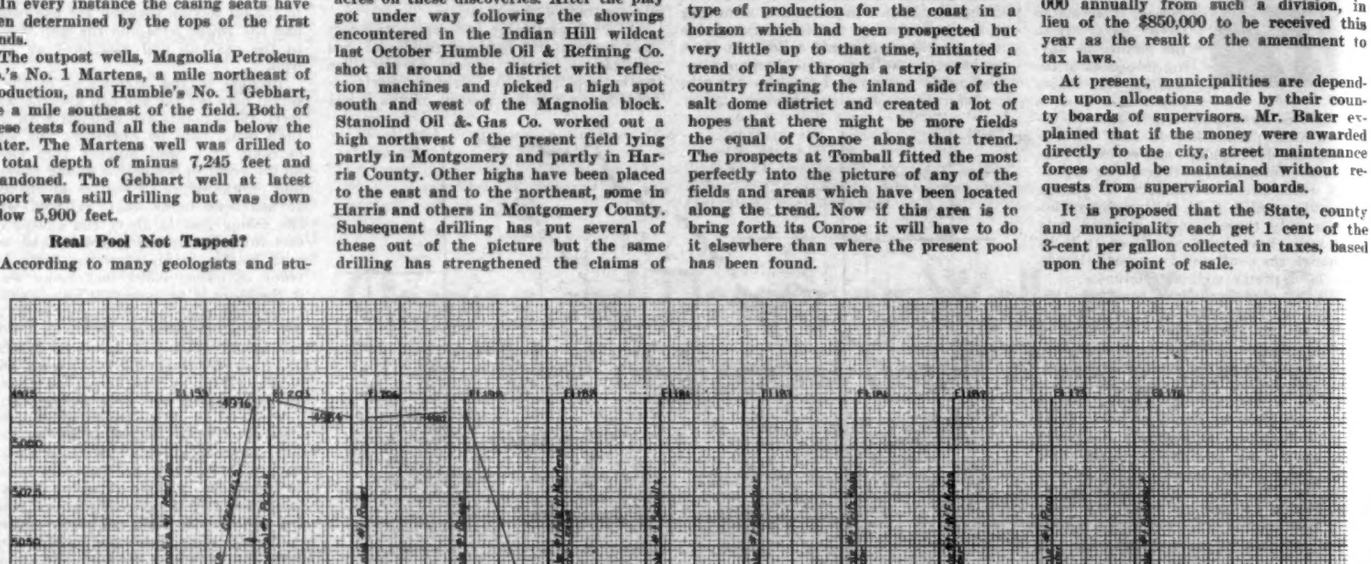


Chart of completed wells in Tomball Field showing producing conditions in respect to gas-oil contact and water level. For position of wells in field see accompanying map

A. I. M. E. Stabilization Forum, Article No. 12: Federal Control of Crude Oil Production

By DONALD H. FORD*

Basis of Federal Authority Considered

At this time when the oil industry is coming under supervision of the National Recovery Administration, it is interesting and perhaps helpful to consider the basis of Federal authority. The general popular conception has been that control of oil production is exclusively a state function.

In The Oil and Gas Journal of June 1, 1933, we published an opinion by Dean Roscoe Pound of Harvard Law School which assumed a state of facts and suggested the course the courts might be expected to take in any industry under the circumstances he outlined. In The Oil and Gas Journal of June 29, 1933, we published an article by Messrs. J. Howard Marshall and Norman L. Meyers, of Yale Law School when written but now attached to the Interior Department in Washington, in which they pointed out that: "If the oil states do not avail themselves of the opportunity to reorganize production under state auspices, they may expect a definite drive for Federal control independent of the states. Legally such control may be achieved by a variety of means." In today's issue we publish, by permission of the Michigan Law Review, extracts from an article by Donald H. Ford of the University of Michigan Law School, that was published in the June, 1932, Michigan Law Review.

After analyzing at some length the authority of the state to legislate on the subject of production control, Mr. Ford devoted a section to Federal authority which we herewith reproduce. The complete article with its comprehensive foot notes and citations is to be found in the Michigan Law Review of the month mentioned. We use here only that part relating to Federal control, but refer the reader to the original article for an enlightening discussion of the entire subject.

Apart from actual judicial decisions rendered by courts of final appeal, it is believed more authoritative sources than the three law schools mentioned would be difficult to find. We interpret all three opinions as pointing in the same general direction. All of them were written before passage of the National Recovery Act. Federal authority to control oil production, provided the states do not or cannot function, is, therefore, apparently not a newly developed Federal power but is one that has lain dormant through disinclination of the Federal Government to act so long as there appeared a reasonable hope that the states might function. The extent to which they have or have not functioned requires no comment here.

There are, of course, two sides to the question of the wisdom and propriety of Federal action. The legal opinions quoted seem to suggest the determining factors would be the public interest involved and the state of facts that prevail. These should be faced frankly during this transition period. We shall endeavor to present opinions on both sides in forthcoming articles—which we believe to be the function of a forum.

(Signed) EARL OLIVER, Chairman
Stabilization Committee,
A.I.M.E. Petroleum Division.

In 1931 the domestic demand for oil in the United States was over 900,000,000 barrels. No further evidence than this is necessary to illustrate the enormous part that oil plays in our economic life. It can be said, with complete justification, that the age of steam has been supplanted by the era of oil. The coal-burning locomotive of yesterday is rapidly being replaced by the oil-burner of today. The merchant marine is undergoing the same transformation. In 1930 there were over 26,000,000 registered motor vehicles in the United States. Warfare has turned to oil—aircraft, war vessel, transport truck and tank are all powered by the various products of oil. Startling as it may seem, 75 per cent of the power of the United States is derived from oil.

The Federal Government is fully alive to the need for oil conservation. And the drift is towards some degree of Federal control, if such control be possible. In 1924 President Coolidge appointed the Federal Oil Conservation Board. The investigations of this body have been thorough and of considerable value to the industry. Its Committee of Nine, after an extensive period of investigation, recommended compulsory unit control and a clarification of the antitrust laws. On August 30, 1927, Hubert Work, then Secretary of the Interior and chairman of the Federal Oil Conservation Board, before a meeting of the Mineral Law Section of the American Bar Association, made the following statement:

"I believe the time has arrived when the Federal Government should ask Congress for legislation to protect our oil deposits against waste in production and the public against future high cost of oil products. Never in our national history was the need for conserving in the ground our petroleum resources more apparent than now."

It must be kept in mind that we are all one people; that waste of oil in one state not only injures that state but also injures the nation. The individual states are unable to control the oil industry. If Oklahoma today determines upon a stringent proration policy, there is nothing to prevent Texas from increasing its production so that the Oklahoma curtailment results simply in a loss to the producers of Oklahoma, a gain to the Texans, and is nugatory as far as the nation is concerned. To be sure, "gentlemen's agreements" between states may sometimes be effective to prevent state competition, but it is submitted that "self-interest" of the states will always be a stumbling block to a true national conservation program.

Three Powers May Be Exercised

There are able lawyers who have said that Federal control is constitutionally impossible. Such control is unquestionably fraught with obstacles. But it is believed that there are at least three powers of the Federal Government under the Constitution that may be exercised for the purpose of controlling oil production: The commerce power, the taxing power, and the treaty power, with the war power as an additional constitutional possibility.

(a) **The Commerce Power.**—Article 1, Section 8, Clause 3 of the Federal Constitution empowers Congress to regulate commerce with foreign nations among the several states and with the Indian tribes.

The history of the 13 states under the Articles of Confederation points clearly to the purpose of the commerce clause of the Constitution. The want of a single authority to control the commercial interests of the people as a whole was strongly felt. To give a unified control, and thus avoid destructive interstate competition, the states surrendered their power over commerce to Congress, giving it exclusive jurisdiction in that field. Mr. Justice Hughes, in the "Shreveport Rate Cases," refers to the origin and scope of this grant of power in these terms:

"It is unnecessary to repeat what has frequently been said by this court with respect to the complete and paramount character of the power confided to Congress to regulate commerce among the several states. It is of the essence of this power that, where it exists, it dominates. Interstate trade was not left to be destroyed or impeded by the rivalries of local governments. The purpose was to make impossible the recurrence of the evils which had overwhelmed the Confederation and to provide the necessary basis of national unity by insuring 'uniformity of regulation against conflicting and discriminating state legislation.' By virtue of the comprehensive terms of the grant, the authority of Congress is at all times adequate to meet the varying exigencies that arise and to protect the national interest by securing the freedom of interstate commercial intercourse from local control."

Nothing could furnish a clearer situation demanding Congressional action to protect the national interest by securing "the freedom of interstate commercial intercourse from local control," than the exigency presented by the existing destructive competitive conditions in oil production and marketing. Rapid exploitation, wasteful production, and unchecked competition injure more than the state of production. The effect is felt in the state of production, in other producing states, in the state of destination, and in the nation. In the state of production, the waste robs the future of that state, lessens its wealth, brings lower prices. In the receiving state, if also an oil-producing state, the oil unfairly discriminates against the producer who has attempted scientific production and conservation. And so long as there is a single state which, for selfish or other reasons, fails to enact effective conservation legislation, it is beyond the power of every other state to protect effectually its own producers against what may be considered unfair and ruinous competition.

Relation of States

Assume that Oklahoma enacts a strict proration law and that Texas does not. It is clear that Oklahoma's interstate business with a third state will be materially restricted, but Texas by expansion of output will soon absorb the market. The result is that Oklahoma's sane efforts to conserve a national resource accomplish nothing. Texas defeats the legislation of Oklahoma. A situation is presented where, like cheap money, bad laws in one state will drive out good laws in another. Yet from the standpoint of the national weal, Oklahoma has attempted highly desirable legislation. And it would be strange indeed if there were no power in the United States that could require that Texas (under our hypothetical situation) cease to compete to Oklahoma's disadvantage.

The state does not have this power, either in fact, or under the Constitution. Each state retains control over its own internal commerce, but it has surrendered what control over interstate commerce it might have as an independent sovereignty, to Congress. A series of cases has held invalid state statutes, innocuous in themselves, attempting to regulate the interstate movement of commodities. If Congress does not have this power it is nonexistent under our Government. It may be fairly asked, what has become of the power surrendered by the states if Congress does not have all the authority that the states themselves have given up? Indeed, as has already been pointed out, it was to meet just such a situation that our Constitution was adopted.

In the light of its history and of its original purpose, the commerce clause should be construed to confer on Congress authority to control destructive competition in oil production and marketing. But it is not necessary to consider the question de novo and to refer simply to the history and original purpose of the clause; both Congress by its legislation and the Supreme Court in its decisions have asserted that "the authority of Con-

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gress is at all times adequate to meet the varying exigencies that arise and to protect the national interest by securing the freedom of interstate commercial intercourse from local control." The legislation and decisions furnish ample precedents for Federal control of the sort here proposed.

Undue State Preference

Thus, the Federal Government does not permit one state to lower its intrastate rates for carriers if its action will affect unfavorably the return of interstate carriers or prejudice localities in another state. The Shreveport Rate Cases upheld orders of the Interstate Commerce Commission requiring the intrastate rates charged in Texas on lines running east of Houston and Dallas to be raised because the Texas rates gave "an unlawful and undue preference and advantage" to Texas cities as against Shreveport, La. The Supreme Court affirmed the "complete and paramount" character of the power delegated to Congress to regulate commerce. According to Mr. Justice Hughes, "interstate trade was not left to be destroyed or impeded by the rivalries of local governments."

Federal control is also exercised to restrain unfair intrastate activities of carriers under Section 1 (Paragraphs 18-20) of the Transportation Act of 1920. Carriers must, according to the act, obtain from the Interstate Commerce Commission certificates of convenience and necessity for the extension or construction of any line which competes or threatens to compete with an interstate carrier. The Interstate Commerce Commission has consistently exercised the power conferred by these sections. In "M. K. & T." R. Co. vs. Northern Oklahoma R. an intrastate carrier was enjoined from new construction on the ground that it had no certificate of convenience or necessity from the Interstate Commerce Commission. The Circuit Court of Appeals held:

"New construction by an existing carrier might prejudicially affect the public by financially hampering that carrier in performing its functions in furnishing an adequate interstate service to the public; by invading a territory already adequately served by another interstate carrier and thus injuring one or both of them, by causing an increase in the group rates or by other means."

Conversely, the commission has exercised its authority to prevent unnecessary extensions or construction by interstate lines designed to compete with established intrastate lines.

Power Established

The lines of authority just referred to establish the power of the Federal Government under the commerce clause to control both the rates and the quantity of transportation service with reference to the national interest and to prevent injury to interstate trade by the rivalries of local governments. The analogy to oil production is complete. If the Federal Government, through its legislative and administrative agencies, can thus control the rates and quantity of transportation service, it is hard to see why it cannot control the quantity of oil transported in interstate commerce; why it cannot establish a system of state proration, under which the quantity shipped by each producing state is limited by reference to production capacity and the existing national market. In so far as the production of oil represents a service to the nation, and in so far as it depends upon the national transportation system for its outlet, it should be subject to Federal control.

Congress has also exerted its power to close the nation to goods that tend to lower American standards, or that tend to injure American lives or institutions. Our protective tariff system is built upon this scheme. The immigration law prohibits the introduction of alien contract labor. And Congress has forbidden the importation of convict-made goods. True, we are dealing here with foreign, not interstate, commerce. But it must be remembered that the grant of power to Congress over foreign commerce is in the same sentence as the grant of power over interstate commerce; it is submitted that from the point of view of exclusion from commerce for the national good, the extent of the Congressional power ought to be the same. As has been shown, the state cannot exclude convict-made goods. If the Federal Government can exclude foreign trade in these articles but not interstate trade, the legitimate industry of one state may be placed at the mercy of the convict labor of another state. And as to oil production, the same possibility of injury exists. One state that refuses to conserve its oil can nullify the acts of all other states and produce incalculable injury to them and to the nation. To say that Congress cannot meet this situation seems absurd.

Prohibitory Legislation

One further analogy: In exercising its power over commerce, Congress has frequently enacted prohibitory legislation purporting to regulate interstate commerce, but which was enacted primarily for the purpose of police regulation. Such legislation in general has been approved by the Supreme Court. Thus, it was held that interstate commerce could be closed to lottery tickets, to impure and adulterated foods and drugs, to products improperly labelled, to women being transported for the purpose of prostitution, to diseased persons or cattle, to obscene literature, to stolen automobiles, to game killed in violation of state game laws, to prize fight films, to liquor, and to goods made in violation of the antitrust laws. Congress has made these goods "outlaws of commerce."

Analyzing these statutes: Each is designed to conserve some general interest such as the national health, the national morals, or the national wealth. If Congress can close interstate commerce to goods produced by monopolies, why can it not close the same channels to goods produced under destructive competitive conditions? Monopoly tends to underproduction and overcharging; unrestrained competition in the oil industry leads to overproduction and waste; the one is as detrimental to the public interest as the other. It is hard to see why the wasteful production of oil does not fit into the same picture, why Congress is not empowered to take appropriate steps to conserve a natural resource, vital to our economic life. To this end Congress should be able to provide for proration, to prescribe methods of production so as to prevent waste, and to establish a system of inspection similar in all substantial respects to the control of production which is exercised by the Pure Food and Drugs administration. Perhaps it would be undesirable for Congress to go this far, but it is believed that the power of Congress to do so is amply supported by analogy to the legislation already enacted and upheld.

Taxing Power

(b) **The Taxing Power.**—To substantiate Federal control of the oil industry under the taxing power, an argument parallel in many respects to that just completed in relation to the commerce power could be made. As in the case of the commerce power, Congress has frequently enacted legislation purporting to be a tax measure, but which was enacted primarily for the purpose of police regulation. Thus, Congress has levied upon oleomargarine, when colored so as to resemble butter, a tax so great as obviously to prohibit its manufacture and sale in competition with butter. It has levied a tax on state banks, the purpose and actual effect of which was to drive them, or at least their circulation, out of existence. However, it does not seem necessary to dwell upon the possibilities of this method of controlling interstate trade in oil as the commerce power seems to furnish a more natural and direct method of achieving the same end.

Treaty Power

(c) **The Treaty Power.**—The Constitution provides that the President "shall have power, by and with the advice and consent of the Senate," to make treaties. "This Constitution and the laws of the United States which shall be made in pursuance thereof, and all treaties made or which shall be made under the authority of the United States shall be the supreme law of the land."

Does this treaty-making power of the United States offer a method of enacting constitutionally valid Federal laws which, under other delegated Federal powers, would be unconstitutional? The cases apparently answer this query in the affirmative. In Missouri vs. Holland the constitutionality of statutes effectuating a treaty between the United States and Canada for the protection of migratory birds was upheld, although a prior Federal enactment to the same effect, but not based on treaty, was held invalid as a violation of state rights. The language of Mr. Justice Holmes in the Holland case is significant:

"It is obvious that there may be matters of the sharpest exigency for the national well-being that an act of Congress could not deal with, but that a treaty followed by such an act could, and it is not lightly to be assumed that in matters requiring national action a 'power which must belong to and somewhere reside in every civilized government' is not to be found."

That this power is broad is pointed out in Goefroy vs. Riggs:

"That the treaty-making power of the United States extends to all proper subjects of negotiation between our Government and the governments of other nations is clear. The treaty power, as expressed in the Constitution is in terms unlimited, except by those restraints which are found in the instrument. . . . It would not be contended that it extends so far as to authorize what the Constitution forbids, or a change in the character of government, or in that of one of the states, or a cession of any portion of the territory of the latter, without its consent. . . . But with these exceptions, it is not perceived that there is any limit to the questions which can be adjusted touching any matter which is properly the subject of negotiation with a foreign country."

To bring the control of oil under the treaty-making power requires, then, but a showing that it is of a nature properly within the scope of international negotiation and agreement. That oil does have such a character is self-evident. One hears of reports of a movement in the League of Nations toward "internationalization of the mineral resources of the world." Treaties involving oil have already been signed. The diplomatic exchange of notes between the United States and Mexico over oil difficulties in the latter country is recent news. Oil has become an international problem of the first rank. To deny the United States the right to negotiate a treaty of conservation and to pass the necessary legislation to effectuate the treaty would be to deny that "power which must belong to and somewhere reside in every civilized government."

War Power

(d) **The War Power.**—Article 1, Section 8, Clauses 11, 12, 13 and 16 of the Constitution. During the exigencies of war Congress could undoubtedly provide for the regulation of the production of oil as a war measure. However, even admitting that Congress may in times of peace prepare for war, it is submitted that before Congress could control oil production in peace times something akin to a national emergency would have to exist. If oil were shown to be so scarce that it needed to be conserved for purely war purposes, Congress could probably do so in times of peace. If this were not the case Congress could, under the war power, control practically all basic industries on the theory that they were of value for war purposes—such as the mining of coal, the manufacture of steel, the growing of foodstuffs, etc. Mr. Chief Justice White's opinion in Northern Pacific Railroad Co. vs. North Dakota, 250 U. S. 135, 149, 39 Sup. Ct. 502, 63 L. ed. 897 (1919) points out that the right to exert the war power ceases upon war's termination.

* * * *

Major legislative development in the law of oil and gas has been very recent. The legislative emphasis has shifted from matters of purely local or individual interest to matters of state and national concern. The aims of legislation have changed from the purpose to protect one neighbor against the injurious acts of another to the purpose of protecting groups of owners, and of conserving the resources of state and nation. The major issues of today are issues of administrative control: Proration, compulsory unit development, and national control to supplement the measures adopted by the states. With these practical issues of administration are involved at every turn important constitutional questions; some of these have already been determined, others remain to be decided, but it is submitted that they will all be settled ultimately in a manner to allow the needed administrative control of production.

CALIFORNIA EXPECTS COURT TEST

LOS ANGELES, Calif., Sept. 9.—California producers and refiners have been looking through rose-colored glasses for the past week.

Court tests, however, are expected in both the producing and marketing branches if the small minority carries out its intention of disregarding provisions of the code. The State, by the way, enacted a statute at the last session of the legislature which recognizes the validity of the NRA and makes its provisions mandatory.

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Refinery Group Hears Symposium on Cracking During American Chemical Society Meeting

By ROBERT C. CONINE
Chicago Bureau, The Oil and Gas Journal

CHICAGO, Sept. 12.—While hardly indicating the countless difficulties surmounted to bring the cracking art to its present state, some idea of the progress made since 1913, when Dr. William Burton completed the first commercial cracking unit at the East Chicago refinery of Standard Oil Co. (Indiana), is given by P. C. Keith and W. B. Montgomery in their statement that it would have required 470 Burton stills charging a prepared gas oil to have equaled the gasoline production of the mammoth unit recently installed at that refinery by the M. W. Kellogg Co. In their paper, "The Development of the Oil Cracking Art," these authors open the symposium on hydrocarbon decomposition at the eighty-sixth meeting of the American Chemical Society, September 10-15, with an outline of the obstacles overcome by petroleum technologists. The symposium occupies the September 14 and 15 sessions of the Petroleum Divisions meeting jointly with the divisions of Organic and Gas and Fuel Chemistry.

Most Refiners Represented

Most of the refiners who have cracking installations are represented at the meeting, and profitably, a review of the technical presentations indicates. However, petroleum refiners who have delayed installations of this increasing necessary equipment are likewise profiting immeasurably from the contributions to this symposium as well as from those discussions covering phases of refining which they are in a position to deal with. "Cracking" is not featured to the exclusion of other important developments. In fact, the Petroleum Division program opened September 12, with a description of various instruments and methods for testing different types of greases; a presentation of a "mechanistic conception of grease structure and its behavior during flow"; description of a method, which is accurate, additive and reproducible, for determining the optical density of a petroleum oil sample; presentation of a new method for computing flow of vapor through bubble cap slots, and the extent to which the slots are occupied by vapor, with other elements of pressure drop considered; recent developments in precise fractional distillation analysis; data on the isolation of minute and unusual hydrocarbons from an Oklahoma petroleum.

Emphasing the quaiitative influence of the "crack per pass" factor variable in the development of the cracking art, as less covered in the literature than the variables of time, temperature, pressure and character of cracking stock, Messrs. Keith and Montgomery open their discussion with this succinct statement: "In a commercial cracking plant the maximum yield of gasolines is made by removing the reaction products from the reaction zone, effecting a separation into the components, gas, gasoline, recycle oil and tar, and returning the recycle oil for further treatment. Crack per pass is total yield of gasoline divided by the ratio of the recycle oil to fresh feed. For example, the fresh feed rate may be 100 bbls. per hour, the gasoline made 60 bbls. per hour, and the oil passing through the cracking zone 300 bbls. per hour. In this case the total yield is 60 per cent, recycle ratio 3 to 1 and the crack per pass 20 per cent. Increasing the crack per pass results in (1) a lower total yield of gasoline; (2) gasoline of a higher octane number; (3) a greater gas production; and (4) an increased tendency toward coke formation." Results obtained with the early Burton-Clark still were 60-65 per cent crack distillate, 25-30 per cent tar and 5 per cent each of coke and gas. The cracked distillate gasoline yield was 50-55 per cent, giving a yield of 30-35 per cent of the fresh feed. Operating temperature and pressure were 800° F., and 75 pounds, and the charging rate was 500 bbls. per cycle. The gas oil used as charging stock had to be carefully selected, and the actual gasoline yield was curtailed because sufficient crackable oil had to be retained in the still to act as a solvent for the tar.

Early Problems

The problems faced by the pioneers in the cracking art are enumerated as follows: To construct a unit which would: (1) handle distillate and residuum stocks

DR. F. W. SULLIVAN, JR.
Standard Oil Co. (Indiana)
President of Petroleum Section

with equal facility; (2) decrease fixed charges by greater capacity; (3) lower fuel consumption by more effective use of heat exchangers and hot oil pumps; (4) utilize the excess heat for other purposes; (5) fractionate the distillate into an endpoint product; (6) increase the length of run and improve the quality of the tar by preventing coke deposition; (7) increase the yield by recovering all the gasoline fractions in the gas and reducing the tar to a minimum, and (8) offer greater ease and safety in operation.

How far petroleum technologists have advanced along the above lines is pointed out by the authors thus: "Further advances in the Cross process have made possible the recent crude topping combination cracking unit installed by Standard Oil Co. (Indiana) at their Whiting refinery. This unit is designed to handle 20,000 bbls. per day of Mid-Continent crude oil. By utilizing waste heat it removes from the crude that part of the natural gasoline cut which has a satisfactory octane number. Subsequently the natural gasoline of low octane value is removed and is reformed into a gasoline of a higher octane value under a pressure of 750 pounds and at a temperature of 1,000° F. The topped crude oil is divided into two fractions, one composed of residuum oil and the other of light gas oil. The residuum oil and heavy recycle stock is cracked in a primary cracker at a temperature of 890° F. and a pressure of 250 pounds. The light gas oil, together with the light recycle stock, is cracked at 940° F. and 200 pounds in a furnace and a reaction chamber. This light stock has been so prepared that it exists completely in the vapor state in this portion of the plant and in order more effectively to utilize the reaction chamber the flow through it is from the bottom to the top. Cracked gasoline is condensed and separated from the dry gas at 200 pounds. Gasoline is stabilized at 250 pounds, utilizing cracking plant heat for this purpose, and the length of run is from 20 to 25 days."

Refiners pioneering in the cracking art sometimes had to construct riveted vessels, which proved leaky, and the lack of modern corrosion resistant and high temperature strength alloys proved an almost inescapable handicap. Control instruments were unknown in the early plants, and valves, fittings, hot oil pumps were liabilities and the refiner was often as not the manufacturer of much of his cracking equipment. The huge Whiting unit is used by the authors to exemplify the improvements in the materials of construction and methods of building. They point out:

"Electrically welded vessels, built to withstand almost any pressure and/or temperature required can be constructed. Hot oil pumps have been developed to such a point that they are no longer a limitation. Enlarged capacity centrifugal pumps, pumping as much as 40,000 bbls.

C. R. WAGNER
Pure Oil Co.
Secretary of Petroleum Section

per day at a temperature of 700° F. and against a discharge pressure of 650 pounds, have been manufactured. The danger attendant with corrosion is reduced by the utilization of such noncorrosive metals as 4-6 per cent chrome-molybdenum. Instrument manufacturers produce reliable temperature, pressure and rate of flow controllers. So great has been the advance in instrument manufacture that in a modern cracking unit all essential temperatures and/or pressures are controlled automatically. To summarize, mechanical improvement has been so great that the ultimate capacity of a cracking unit is determined by the size of vessels which can be shipped."

Vapor Phase Cracking

C. R. Wagner, Pure Oil Co., in his paper of this title, classifies vapor-phase cracking operations into two general types, i.e., low pressure and high temperature, and higher pressure and lower temperature. The Gyro process, which operates at a terminal pressure of less than 50 pounds gauge and at temperatures ranging from 1,070° F to 1,150° F., represents the first type, and the DeFlores process, which operate at pressures in excess of 100 pounds gauge and at temperatures of about 1,035° F.

Time and temperature, Wagner cites Geniesse and Reuter, are the only factors of importance in high temperature cracking at atmospheric pressure, and he states their conclusion that the same results can be obtained at high temperatures with short reaction times as are produced at low temperatures and long reaction times. For instance, an increase of 31° F. in reaction temperature approximately halves the time required to produce a given amount of cracking. Wagner takes up the question of the validity of the contention of Geniesse and Reuter, that "the properties of the gasoline are the same for a given time-temperature index," thus: It is postulated by Geniesse and Reuter and generally agreed that decomposition rates decrease for a given temperature with decreasing molecular weight of the hydrocarbon reacted upon. Results obtained by Osterstrom and Wagner show that the character of distillate produced at lower temperatures was noticeably inferior to that made at higher temperatures, although they admit that their figures do not afford a comparison on the basis of equal time-temperature indices. Since the lower temperature operation, Wagner says, gave a preponderance of heavy gasoline fractions, it is scarcely to be expected that continuing the time of reaction of these low temperatures would further split up these heavy gasoline fractions instead of making more of them from the gas oil available. By running average Mid-Continent crude, Wagner continues, to produce equal percentages of 70-72 octane number gasoline, it will be necessary to reform an appreciable quantity of naphtha when cracking at high pressure and 975° F. to 1,000° F. By cracking at low pressure and temperatures of the order of 1,100° F. and polymerizing the gas produced in a separate operation, no reforming of straightrun naphtha is necessary.

After presenting a table comparing the characteristics of the products produced by the two types of processes, operating on heavy Venezuela crude oil, Wagner points out in his conclusion the following: "In a previous paper it was indicated that the character of the charging stock had relatively little to do with the character of the products produced by low pressure vapor phase cracking. More information on that point indicates that considerable variations in products are effected by changing the charging stock, though the effects are less pronounced than where cracking takes place at lower temperatures.

Economics of Petroleum Cracking

Gustav Egloff, Universal Oil Products Co., in his presentation of the above title, outlines the economic forces operating through the cracking process. In the oil industry, through conservation of crude

(Continued on Page 33)

The recovery code may stop bad marketing practices but it won't make the motorist buy straight-run gasoline because his engine won't stand for it

Motorists buy Dubbs cracked gasoline because their engines like it—there has never been enough to go around

Dubbs cracking makes the highest yield of the best gasoline from any charging stock at lowest cost—royalty and all

That is the way to recovery—both gasoline and profits

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

Method for Gauging Sunlight Exposure Period to Determine Color Stability of Gasoline

By ERWIN C. HOEMAN
Chemical Engineer, Washington, Mo.

A widely-adopted practice for securing pertinent data relating to the color stability of gasolines, and of other petroleum distillates, consists in exposing samples of such materials to a period of sunlight irradiation. The reduction in numerical color value, as determined on the Saybolt instrument, is considered a measure of resistance to photochemical formation of color-bodies. When there is available no definite information with respect to the intensity of sunlight, during test period, as is the case in usual practice, only such results as have been obtained, synchronously and subject to identical test conditions, are of comparable value.

In the conventional procedure for test, 100 ccm. samples of the oils to be treated are placed in 4-ounce "oil sample bottles." The bottles selected for this service are of clear glass, of uniform wall thickness, and are thoroughly clean and dry before introduction of the sample. After exposure to direct rays of sunlight, for an arbitrary period of test, the degradation in numerical color value is determined. This practice, in general, contains no variables that may not be directly evaluated and controlled, with the exception of that related to knowledge of the quantitative absorption of actinic energy. Effective absorption of actinic quanta may not be duplicated, from day to day, without the assistance of some auxiliary, actinometric device. In other words, the actual time of exposure, in itself, does not afford a measure of actinic influence.

Actinometers of various kinds have been used to measure the intensity of solar radiation, but there is need for a more direct indication of the test period endpoint than now possible of determination. It is proposed to record here the results of an effort to find such a device.

Reagents Studied

A number of reagents were studied, including silver halides, mercuric chloride, cupric oxide, and many ferric compounds. All of these, and many other compounds, undergo a change in ionic form when subjected to emanation from a source of actinic energy, usually a reduction from a state of higher to a state of lower valence. The ferric salts were of particular interest, by reason of their ready response to actinic influence, and because many sensitive indicators are available for distinction between ferric and ferrous ions. Preliminary trials indicated that ferric oxalate possessed, to a high degree, desirable actinometric properties. This compound is of the pseudo-reversible order, in regard to its photochemical behavior, being reduced by light according to the following reaction:

$$Fe_2(C_2O_4)_3 \xrightarrow{\text{light}} 2\,Fe(C_2O_4) + 2\,CO_2$$

Experimental Procedure

A stock solution was prepared, to an approximately 1 per cent content of ferric ion, by adding the contents of an original package of ferric oxalate to a calculated volume of distilled water. Reagents and solutions must be handled only by red-light illumination and must be stored in the dark. These precautions against premature exposure to strongly-actinic light should never be neglected[1]. From the stock solution, cells were prepared, to a volume of 100 ccm., in 4-ounce oil sample bottles, and in a series of ferric ion concentrations. These, as well as the stock solution, were wrapped carefully in red crepe paper and stored in the dark until the time for their use.

Initial experiments revealed that solutions, prepared as above, fail to retain their original ferric condition; ferrous oxalate appearing in the bottoms of containers, and liquids responding positively to test for ferrous ion. In order to prevent this reduction, before time of test, two methods of oxygenation were tried: (a) Bubbling a stream of air through solutions while in dark storage. "In the dark, ferrous oxalate is reoxidized to ferric oxalate by the oxygen of the air,"[2] and (b) addition of hydrogen peroxide to the distilled water used in preparation of solutions. Each of these two methods served the purpose; (b) was found to be the more convenient and effective. Stock solutions, containing a relatively small percentage of hydrogen peroxide, and in tightly-stoppered bottles, may be maintained in dark storage for considerable lengths of time, without suffering degeneration from their ferric state.

Indicator solutions were prepared, in 5 per cent solutions, of the following: For ferric ion, potassium ferrocyanide, potassium thiocyanate, and sodium salicylate; for ferrous ion, potassium ferricyanide. Potassium thiocyanate, an extremely sensitive indicator for ferric ion, failed to give a clearly-defined endpoint, under conditions of test. Of the three ferric indicators, potassium ferrocyanide proved the most desirable and was employed, exclusively, in subsequent tests. Potassium ferricyanide, a light-sensitive compound, needs be freshly prepared, or stored in the dark, when not in use.

Actual concentrations of ferric ions in the initial cell solutions depend upon the dilution ratio of stock solution to the "peroxidized" distilled water. Test intervals, of any convenient period of time, under conditions of normal sunlight intensity, were secured by variation of ferric ion concentration. Table 1 indicates the general order of magnitude required. In considering these tabulated results, it should be remembered that time of exposure bears no direct and observable relationship to ferric ion reduction, as sunlight intensity is a constantly variable factor. For instance, in the case of the 0.10 per cent ferric-ion actinometer, on July 8, six hours and 10 minutes were required for reduction, while on June 30 only four hours of exposure were needed. In the usual "sunlight stability test" this disparity might easily pass unobserved.

TABLE 1—INTERVALS OF SUNLIGHT EXPOSURE AS OBTAINED BY "RECOMMENDED PROCEDURE"

Weather—	Date	Hour of test	Ferric ion concentration, by weight— 0.10% Hrs.	Min.	0.15% Hrs.	Min.	0.20% Hrs.	Min.	0.25% Hrs.	Min.
Very clear	6/29	8:15	4	15	4	40	4	40	5	00
Very clear	6/30	8:15	4	00	4	15	4	20	5	10
Hazy and hot	7/1	8:15	5	50	6	00	6	10	6	30
Clouds	7/2	8:15	5	10	5	15	5	45	6	45
A few clouds	7/5	8:15	4	30	4	50	5	15	6	00
Extreme cloudiness	7/8	8:15	6	10	6	45	7	00	7	20

Preparation of Actinometers

1. Use ferric oxalate hexahydrate, as supplied by a reputable manufacturer of reagent chemicals, for all actinometer solutions. This material will carry a printed analysis, similar to the following: Cl—0.003 per cent, SO_4—0.12 per cent, and ferrous salt (as Fe)—0.10 per cent. Store in original packages, in the dark, and handle contents only by red-light illumination.

2. Both stock and cell solution are prepared by red-light illumination and are stored in the dark, in the case of the cells, until time for their use.

Prepare a preliminary solution of distilled water, containing 20 per cent by volume of C.P. hydrogen peroxide (the 3 per cent reagent), and 5 gms. of pure oxalic acid crystals to the liter. (The provision for a slight excess of oxalate ions in solution insures the complete oxidation of ferrous salts and prevents precipitation of unoxidizable iron salts. In addition, the slight excess of oxalate ion, in exposed cells, promotes the clean settling of ferrous oxalate, and entirely avoids the clouding of cell walls during test.) Weigh out a calculated quantity of this solution, so that the contents of an original package of the ferric oxalate will form a solution containing a known concentration of ferric ion. Keep this stock solution well stoppered and in dark storage for 24 hours before use.

About 12 hours before time set for proposed sunlight stability test, prepare the cells by dilution of stock solution with the peroxidized distilled water. These cells should be 4-ounce oil sample bottles of the best quality, and identical with those in which the oil samples are to be exposed. Actinometers and oil samples should contain volumes of 100 ccm. Cells are wrapped in red crepe paper, left unstoppered to stabilize their content of free oxygen, and stored in the dark until time of test.

Use of Actinometers

Preparatory to exposure of cells, pour a few drops of solution from each onto a white surface, a "spot-plate," and test for the presence of ferrous ions, with potassium ferricyanide indicator solution. Negative test, i.e., failure to develop a blue discoloration and precipitate, indicates that cells are in proper ionic state. In addition, there shall be no precipitated material within the cells, either on the bottom or clinging to the walls.

Expose cells and oil samples, simultaneously, and all, as nearly as possible, normal to the path of incident sun rays. From time to time, test the progress of reduction in cell units, by adding a few drops of cell solution to an identical volume of potassium ferrocyanide indicator solution. Small, 5 ccm. vials or test tubes are convenient for this purpose. When a blue discoloration and precipitate just fail to appear, the cell solution has been reduced, and endpoint of test is reached. This endpoint is well defined and presents no difficulties for exact determination.

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[2]Getman, Theoretical Chemistry (fourth ed.), p. 639.

Increasing Amount of Motor Fuel Tax Money Being Diverted From Roads

By F. E. PACKARD
Standard Oil Co. (Indiana)*

It was the avowed purpose of the motor fuel tax from the beginning that it was to be devoted to the building and maintenance of state trunk highways or primary roads. For the first decade of its history this policy was generally accepted and adhered to, but during the past three or four years there has been a universal tendency to divert it for all conceivable purposes. In fact, today, probably one-third of the tax is being diverted to other purposes. It has been diverted for almost every purpose of government, by legislative enactment and illegal appropriation by officials, and hundreds of proposals have been made for other diversions, as revealed by a survey of the bills introduced into the 1933 legislative assemblies throughout the country. In addition to the actual diversions, I found that there had been introduced in excess of 200 measures in the assemblies in session in 1933 seeking to divert this tax for widely diversified purposes. It was sought to divert it for the maintenance of counties, municipalities, schools, poor and unemployment relief, pensions, reform of convicts, oil inspection, commerce and navigation, state parks, hospitals, to advertise state parks, to build parks and boulevards, reforestation of privately-owned lands, highway patrol, to enforce registration laws, to establish rural mail routes, as well as to divert it to general funds, to pay salaries, and for the general operation of governments. These bills were found in all the states.

Probably the most insidious form of diversion is to townships, counties, and cities to relieve property of the general tax burden. Such a diversion means that this one commodity will be compelled for many years to bear a staggering burden of local and state taxes. The popularity of this form of diversion may prevent any lessening of the motor fuel tax for a generation.

The accumulation of immense amounts of money in highway funds, thereby tempting legislatures and state officials to divert it to other uses, is not the only evil involved in this scheme of taxation, which threatens the very existence of this great industry. I refer to the evasion of the tax. Three and one-half cents a gallon is the lowest tax in the United States, and it ranges upward to the high point of 12½ cents. It goes without saying that any such tax upon a commodity which can be delivered in car lots for 5 or 6 cents a gallon, opens the way to wholesale evasion. A single bootlegger can wreck the market price of a wide area, and as soon as he is run to earth two others take his place, and so the vicious circle repeats itself. Gasoline, in wide areas, is being sold today by honest marketers below cost. The wisest men in the industry stand helpless before this problem and see no avenue of escape.

Diminishing Returns

A number of years ago I discussed with the gentlemen of this conference the law of diminishing returns. It was then generally disputed. It was difficult to point to specific instances of where the added tax had diminished consumption. The failure at the time of its operation

(Continued on Page 39)

*Before the North American Gas Tax Conference at Indianapolis, Ind.

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The White House Conference

As indicated in these columns last week price fixing by the government is out for the present. Whether we ever have it will depend upon the course of the industry itself.

The price fixing section will remain in the code as signed by the President but it will be inoperative until it is seen whether the balancing of supply with demand will adjust prices on a reasonable level, giving the industry a return that will provide for larger employment yet assuring the consumer of a fair price.

If this can be accomplished without the government actually setting prices, from the well to the filling station, the purpose of the code will be attained. The industry will escape the rate controlled fate of the railroads and the utilities and the government will avoid the pitfall of price fixing which, if started in one industry, must sooner or later spread to all.

The difficulties of price fixing in an industry with such a complexity of factors is shown by the prolonged but ineffectual efforts of the industry's representatives.

Differences between producing areas, even between wells; between methods of refining; between proportion of products and between the quality of products; between methods of distribution; differences between the viewpoint of the operator who produces oil only and the integrated company which produces crude, refines it and markets the products; between the operator of the skimming plant in the field and the modern refinery at the point of consumption, these and a thousand other factors beget endless differences of opinion and make agreement upon any compromise almost impossible.

If the industry cannot get together on price fixing what hope is there for the government being satisfactory?

History shows that where price fixing was attempted the results never stood up. Control of prices ultimately means control of costs, including wages. Fresh from experience with bootlegging and racketeering under prohibition, American industry may well fear the effects of price fixing that failed to hold public support.

Demand for governmental price fixing in the oil industry sprang from a conclusion that improvement in prices could not be obtained any other way under existing conditions.

Crude oil producers had made sacrifices in the effort to stabilize the market at a living price through curtailment but the better prices failed to materialize because overproduction continued. Excess supplies of gasoline, evasion of taxation, bootlegging and price-cutting were continually harassing the refiner and marketer who was striving to steady the industry.

No wonder that many of these, despairing of other relief, turned to government price fixing as the lesser of two evils.

But Secretary Ickes, appointed oil administrator and entering upon his duties without the scars of experience, was able to analyze the situation with a fresh mind.

He knew that when production equalled demand and no more, whether of crude oil, gasoline, shoes or what not, producers would get a fair price. Also that if production exceeded demand prices would fall in proportion to that overproduction. Or, if production failed to equal demand that production would be stimulated by higher prices offered by would-be consumers.

This is elementary, although many in the oil industry have hoped they could unload their overproduction without being caught by the inevitable effects.

So Mr. Ickes, being a man of common sense, and not an oil man, suggested that before the government tried price fixing by edict, the industry should try conforming to the older law of supply and demand and by cutting out overproduction of crude oil and refined products see what happened to prices through the normal operations of that economic law.

Those who have been asking government price fixing have been so frequently and continuously disappointed in every effort to halt overproduction that their hope turned to skepticism. But Mr. Ickes thought it worth while to have another trial this time with the government behind the restriction of production.

Some, perhaps, doubted whether even the government could enforce curtailment. The record of state regulation justified that doubt, but the government's control over "hot" oil interstate shipment is a new factor.

It is, as Mr. Ickes believes, worth trying. The course of prices since his announcement has been encouraging, indicating that if production is at last brought into line with demand, the price situation may be solved without governmental fixing.

But, even with that, much remains to be done. While many, perhaps most, of the troubles of the industry have arisen from excessive production of crude, and the balancing of crude supply with demand should check overproduction of gasoline, there are many other problems that require attention if the industry is to be stabilized.

These will engage the attention of the planning and co-ordinating committee of fifteen under the supervision of Mr. Ickes. The subcommittees appointed to take charge of the various divisions of the industry are representative selections and with the aid of regional committees results should be secured.

As the planning and co-ordinating committee says: "With hundreds of thousands of men in the industry watching the 'chiselers', it seems unlikely that any important violations of the code will fail to be reported."

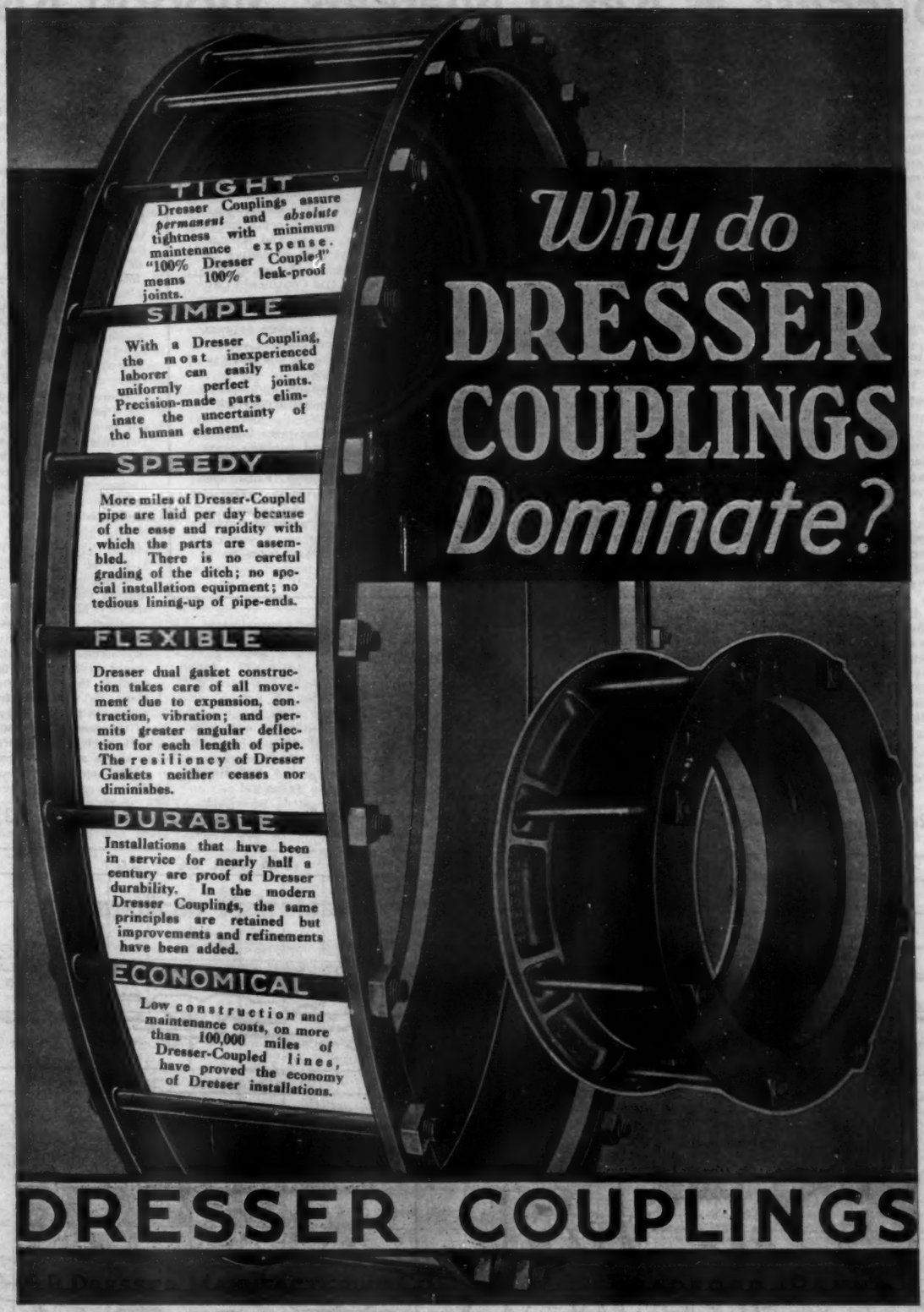
The industry will, in fact, police itself, backed by the authority of the government. If abuses or violations are tolerated the industry will have no reason to complain, because it will be its own fault.

It is not, however, to be expected that everything is going to be accomplished at once. Some of the more extreme expectations, possibly are not going to be attained at all.

But if the industry sits tight and does not rock the boat; if for the next few weeks it proceeds on the assumption that production and supply are going to be balanced and that prices will reflect that balance, it will be taking the practical course.

The industry today is in better position than it has been for years, because it has an opportunity to anchor itself on a sound foundation, supported, but not controlled, by the government.

Without waiting, why not begin to build on that basis?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Drive Toward Higher Refinery Prices Meeting Success as Retail Markets Support Rise

By W. T. ZIEGENHAIN

As the result of a statement by Secretary Ickes to the effect that the Federal administration would use its "full power" if necessary, to maintain gasoline prices at a level fair to both consumers and producers, refinery sales managers in the Group 3 (Oklahoma) market were holding all products at prices substantially higher on Tuesday of this week.

On Tuesday all of the larger refiners were quoting third grade gasoline at 5 cents or more and felt confident the general program of advancing the market to a profitable level based upon $1 crude would materialize within another two weeks.

This is refered to here as a program but obviously, there can be no arbitrary planning in regard to refinery prices beyond the desires of the administration in Washington. For that reason, Washington has supplied the oil news for the past week and a study of what has happened there explains the present status of the Mid-Continent refinery market and also serves as the best index of what to anticipate over the immediate future.

Early in the week the Planning and Co-ordinating Committee of 15 met to discuss a rather definite schedule of refined oil prices for which "cost of manufacture" served as a basis. There naturally was some difference of opinion in regard to the cost of manufacturing gasoline, for instance, in a strictly skimming plant and a complete plant, a difference between cost in an Oklahoma refinery and a Pennsylvania plant and between a large plant and a very small one. However, after augmenting the force at Washington with a fresh group of refinery operating executives and refinery cost accountants, a set of cost figures was prepared and there was a general agreement among the committee that the schedule of refined oil prices finally arrived at was equitable.

For want of a definite basis at the time, the committee accepted these costs on the basis that 36 gravity Mid-Continent crude be posted at $1.11. The resulting calculated price for 60-64 octane gasoline in the Mid-Continent was 6½ cents. To provide a price for all grades of gasoline a complete table of calculated costs was derived and approximated the following:

Grade—	Cost per gallon (cents)
Below 50 octane	5½
50 to 59.9 octane	6
60 to 64.9 octane	6½
65 octane and above	7

The thoroughness with which these data were compiled won their approval before the Planning and Co-ordinating Committee and it sought to present these to the President at the proposed meeting with him on Monday. At this meeting it was thought that he might name a minimum gasoline price as provided for in the oil industry's code along lines set out in the cost analysis.

In anticipation of the President's naming a minimum gasoline price, Mid-Continent refiners pushed up their quotations during the week from one-half to 1 cent on each grade. More concrete support of these higher prices came in the form of a one-half cent advance in the tank wagon and service station gasoline prices throughout the marketing territory of the Standard Oil Co. of Indiana on September 7 and a full cent on September 9.

No Price Fixing Yet

However, the proposed meeting with the President on Monday did not work out in quite the manner as had been anticipated and an announcement of the results of the meeting as given out by Secretary Ickes settles for the time being at least any move to establish minimum refinery prices based on the cost data mentioned.

The meeting with the President included only a few of the Committee of 15 and it is apparent that the Government does not care to assume the role of regulating prices this early if the industry shows evidence of being able to make adjustments without their help. The fact that the administration has sanctioned reasonable prices makes it reasonable to expect still higher quotations in the immediate future. The desire of the President to withhold from establishing a minimum price at this time did not weaken the general market on Tuesday.

Refiners were determined to hold their products at the new market level and to push them still higher over the coming

Refined Market Barometer

Refined oil prices advanced during the past week in every refining area. Gasoline was particularly strong in the Mid-Continent, Eastern Seaboard and California markets. Natural gasoline shared in the general increase. The announcement Tuesday that effective on the following day the Standard Oil Co. (Indiana) would raise the kerosene station price 1 cent, special naphthas 2 cents and all furnace oils one-half cent gave renewed strength to entire list. The firm market for neutrals in Pennsylvania is leading the way toward higher prices in Mid-Continent soon. Bright stocks up in Mid-Continent market. Fuel oil and gas oils advance in Mid-Continent, California and along Gulf Coast. Wax firm with prospects for advancing over immediate future.

Mid-Continent—Larger refiner advance all grades of gasoline approximately 1 cent. Natural gasoline equally strong. Kerosene, furnace oil and heavy fuel oils higher and firmly established. Bright stocks up one-half cent with neutral and wax likely to advance over next two days.

East Coast—Advance of 1 cent in gasoline tank wagon and station prices along East Coast in past week greatly strengthens refinery market. Export quotations for gasoline advance also.

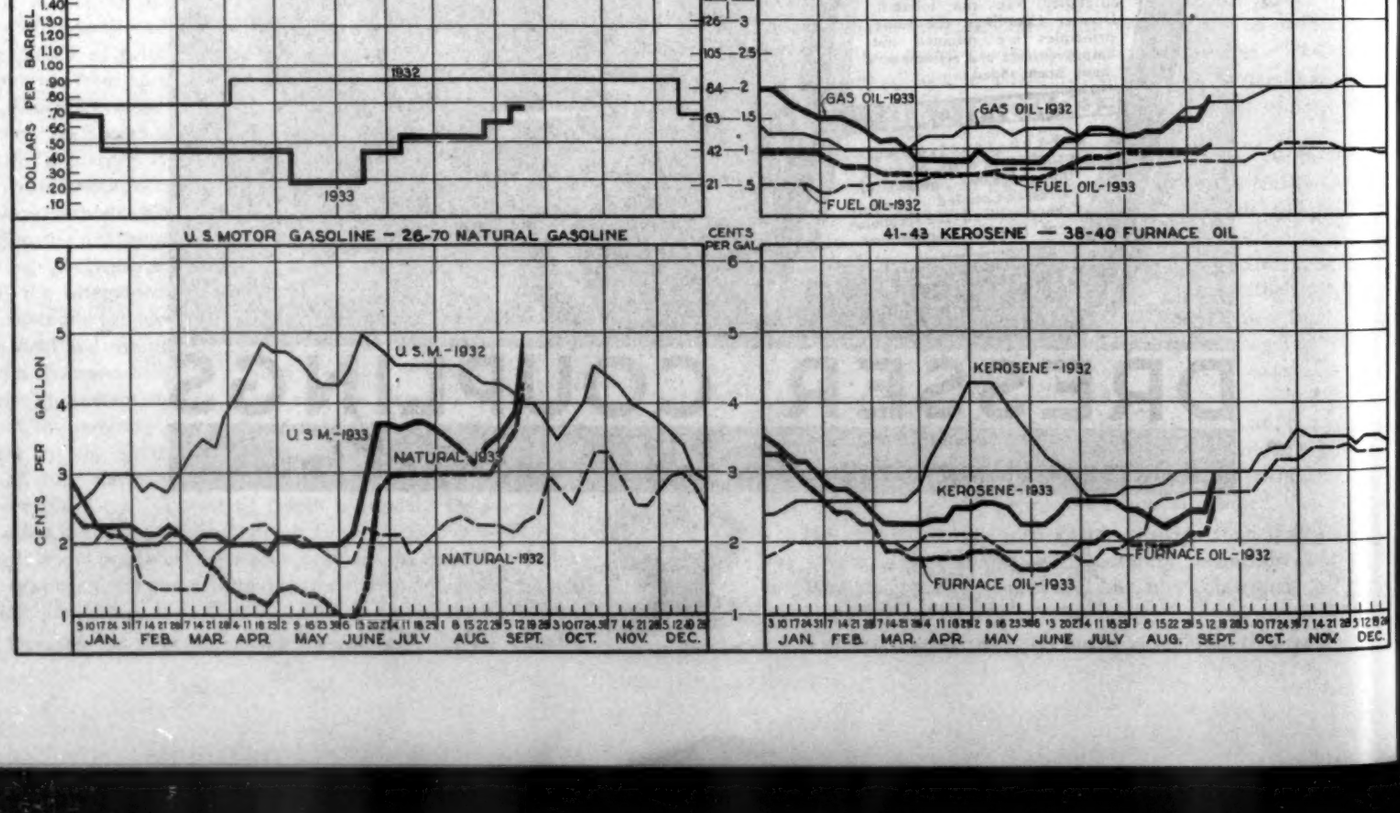
Chicago—An advance of 1½ cents in the retail gasoline price followed by an advance in each the retail kerosene, furnace oil and naphtha, gave strength to the entire list of products.

Gulf Coast—Fuel oil advanced more than other products. Entire list strong with extremely competitive lubricating oil market likely to rise to normal price level.

California—Gasoline prices advanced 1 cent. Natural gasoline strong. Small shipments of bunker fuel quoted 5 cents higher.

Pennsylvania—Gasoline strong. Balance of list firm. Wax promises to advance soon.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



week. They hope this will be followed in another 10 days with another crude advance which will bring the entire schedule of prices from the producer to the retailer to somewhere near a profitable level.

By-product Values

Most of the discussions among refinery salesmanagers and most of the cost data has been prepared with the thought of getting gasoline prices up to a profitable level. This idea also fits in well with the general conception of refinery cost accounting in which gasoline is taken as the product and all others are by-products. For computing the cost of gasoline the value of these by-products is subtracted from the total revenue from a barrel of crude and the difference is what gasoline must bring to break even.

Obviously, if the value of these by-products may be enhanced, the amount of money needed to be derived from gasoline in order to yield a constant return to the refiner becomes less.

It so happens that about one-half of the crude is consumed in the form of gasoline and the other half by-products. It also so happens that gasoline is sold by the oil industry directly to the consumer while a great bulk of the by-products go into other industries and the final consumer of goods purchases this oil in the form of shoes, a railroad ticket, laundry work, etc.

Also, under the NRA, provision is made for all industries to advance prices for their services on the basis of increased operating costs and when any industry pays more for the fuel oil it consumes under the boilers or more for the lubricating oil it consumes to keep its machinery going, it is justified in charging more for its finished product. So, by increasing the revenue from so-called by-products the oil industry will not find it necessary to increase the filling station price for gasoline as much and will lessen the opposition to higher prices on the part of the actual consumer.

The efforts of sales managers are being aimed in this direction and it is becoming apparent that over the immediate future these will be felt. In this connection it should be mentioned that fuel oil is the principal by-product and the market for this will be greatly strengthened when excessive crude production is eliminated and assurance is given that refinery crude runs will be held within current demands under the code.

The low octane motor fuel was being tightly held by Mid-Continent refiners on Tuesday at quotations from 5 to 5¼ cents. The correctness of their policy of adhering to a relatively high price schedule during the past two weeks of improving markets held all sellers to the side lines and caused a decidedly smaller trading volume. Those who are watching each turn of events now wonder whether this falling off in shipments will serve as the beginning of price shaving again.

However, there does not seem to be much competition offered from the material said to be held on leased tracks near Chicago which was bought and delivered when gasoline was under the 4-cent level. So, until some thing more definite results in the form of increased shipments to justify a further advance, or price shading to influence a reduction, the gasoline market is treading on thin ice and time must be awaited. The premium grade or high octane motor fuel was generally quoted at 6 cents while the middle grade was being traded at 5¼ to 5½ cents on Tuesday.

In the balance of the list of gasoline prices proportionate increases are shown for the respective grades but the volume of gasoline moving is also small.

Natural Gasoline

The 26-70 grade of natural gasoline took a price advance in the week which was about equal to that of refinery gasoline. The market was firm on Tuesday with 26-70 quoted generally at 4¼ to 4½ cents. There was a proportionate increase in the prices quoted on the other grades and the low vapor pressure material approximated refinery motor fuel prices. The 15-pound material was quoted at 5½ cents and the 11-pound at 6 to 6¼ cents.

Kerosene

Kerosene prices were advanced approximately one-half cent with the 41-43 grade selling at a price range of 3 to 3½ cents on Tuesday. The marked improvement in kerosene's position was partly the result of the announcement Tuesday morning by the Standard Oil Co. (Indiana) that effective on Wednesday morning the retail price of kerosene would be advanced 1 cent throughout its territory.

Kerosene is one of the more important by-products which will receive considerable attention in the industry's efforts to raise the total revenue from crude and with the winter season approaching there is general belief that the future of the market may be viewed with optimism.

Furnace Oils

All grades of furnace oils moved upward in price during the week. Prices on furnace oils were greatly strengthened on Tuesday as the result of an announcement by the Standard Oil Co. (Indiana) that it would increase its retail furnace oil prices one-half cent on the following day. While the market was somewhat unsettled and because there were relatively few cars actually moving there certainly was no desire on the part of refiners to back down from the relatively high price level.

Gas Oil and Fuel Oil

Gas oil and fuel oil are also coming in for their portion of the general advance of refinery prices. The low gravity fuels sold from 5 to 10 cents a barrel above the market of a week ago and gas oils were from three-eighths to one-half cent higher.

Lubricants and Wax

Prices on bright stocks were advanced one-half cent on Monday and neutrals promised to be quoted higher within the next two days. Full support of higher

(Continued on Page 32)

California Likely to Regain Position on East Coast as Source of Supply

By L. P. STOCKMAN

LOS ANGELES, Calif., Sept. 9.—One of the most interesting developments is the probability that California will soon resume shipment of fuel oil and furnace oil to the East Coast for domestic consumption. It has been several years since any considerable quantity of crude or fuel oil has been moved to the Atlantic seaboard for domestic consumption. In 1931 California marketers shipped 16,153 bbls. of fuel oil to the East Coast for domestic consumption but did not ship a single barrel during 1932. In the first seven months of 1933, California marketers shipped 805,661 bbls. of fuel oil to Atlantic and Gulf Coast ports. Shipments of fuel oil to the East Coast are expected to be started within 30 days and to continue for several months. California marketers have made commitments covering approximately 3,000,000 bbls. of fuel oil and may dispose of an additional substantial quantity if this meets with approval of Secretary Ickes. The fuel oil involved is reported to have been sold to eastern buyers for approximately 55 cents per barrel and on this basis can be laid down in New York for about 95 cents providing the present quotation for dirty bottoms remains at 40 cents per barrel.

Early resumption of fuel oil shipments to the Atlantic seaboard for domestic consumption will prove especially beneficial to California producers if subsequent commitments are made at a higher price as this will permit the central proration committee to substantially increase the allowable production of heavy crude oil, which for the past several years has been a drug on the Pacific Coast. There were 100,975,055 bbls. of heavy unrefinable crude and refinery residuum on hand in Pacific Coast territory at the close of July, 1933, and while stocks of this commodity have been reduced 199,238 bbls. during the year to date, this is only of minor consequence. California stocks of heavy crude and fuel oil are at least 50 per cent too high and have been a depressing factor for the past decade due to the inability of marketers to dispose of current production and at the same time reduce stocks to any substantial extent.

Gas Oil Scarce

Recent developments indicate there will be a substantial shortage of gas oil and heating oil in California during the coming winter and prices are expected to reach a much higher level. Quotations on gas oil and Diesel have already reflected the anticipated demand and, according to refiners, gas oil, Diesel and heating oil will command at least a dollar in the spot market within 30 days. There has been very little gas oil, Diesel or kerosene distillate available for several months. It is usually customary for California marketers to anticipate the winter demand by building up stocks of furnace oil and heating oil, but refiners have been unable to follow out the usual practice this year. It is probable therefore that citrus growers may be forced to use a blend of kerosene distillate and fuel oil in place of the regular smudge or orchard heating oil if a sudden freeze sets in or a prolonged cold spell is experienced during the winter.

American Petroleum Institute Weekly Refinery Statistics

Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Total motor fuel stocks. (4) Gas oil and fuel oil stocks. All figures in 42-gallon barrels.

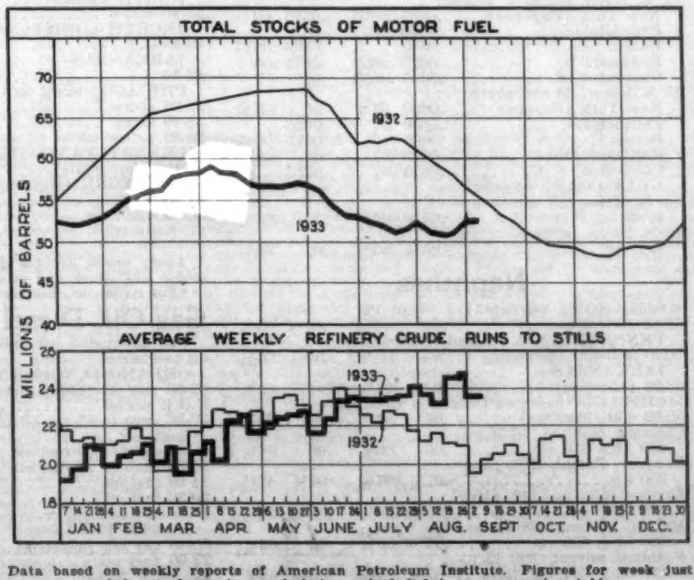
Week Ending September 9, 1933, Compared to Week Ago

	Week ending September 9, 1933				Week Ending Sept. 2, 1933			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	496,000	14,029,000	9,203,000	100.0	460,000	14,516,000	9,186,000
Appalachian	92.6	85,000	1,885,000	839,000	92.6	78,000	1,976,000	830,000
Ind., Ill., Ky. ...	97.3	328,000	6,765,000	5,582,000	97.3	340,000	6,676,000	5,057,000
Okla., Kans., Mo.	82.1	262,000	5,032,000	4,215,000	82.1	267,000	4,865,000	4,056,000
Inland Texas ...	58.7	99,000	1,278,000	1,808,000	58.7	78,000	1,254,000	1,845,000
Texas Gulf	98.0	420,000	5,691,000	6,966,000	98.0	480,000	5,897,000	7,170,000
Louisiana Gulf..	100.0	137,000	1,186,000	1,924,000	100.0	128,000	1,376,000	2,016,000
N. La. and Ark..	92.6	55,000	246,900	660,000	92.6	61,000	238,000	657,000
Rocky Mtn.	78.8	36,000	834,000	715,000	78.8	33,000	802,000	763,000
California	96.9	449,000	13,967,000	98,847,000	96.9	459,000	13,943,000	98,425,000
Total U. S. ...	92.2	2,367,000	50,913,000	130,759,000	92.2	2,384,000	51,543,000	130,005,000

Total motor fuel stocks Bureau of Mines basis 52,910,000 bbls.

Week Ending September 9, 1933, Compared to Year Ago

	Week ending September 9, 1933				Week Ending September 10, 1932			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	496,000	14,029,000	9,203,000	100.0	418,100	15,455,000	9,365,000
Appalachian	92.6	85,000	1,885,000	839,000	91.3	77,400	1,941,000	1,027,000
Ind., Ill., Ky. ...	97.3	328,000	6,765,000	5,582,000	98.9	278,000	7,063,000	4,282,000
Okla., Kans., Mo.	82.1	262,000	5,032,000	4,215,000	89.6	233,600	4,700,000	3,425,000
Inland Texas ...	58.7	99,000	1,278,000	1,808,000	76.5	102,300	1,462,000	2,085,000
Texas Gulf	98.0	420,000	5,691,000	6,966,000	99.8	329,400	5,015,000	10,176,000
Louisiana Gulf ..	100.0	137,000	1,186,000	1,924,000	100.0	99,000	1,626,000	4,281,000
N. La. and Ark..	92.6	55,000	246,000	660,000	97.0	40,300	199,000	604,000
Rocky Mtn.	78.8	36,000	834,000	715,000	89.4	32,600	1,539,000	581,000
California	96.9	449,000	13,967,000	98,847,000	96.7	419,400	15,536,000	99,901,000
Total U. S. ...	92.2	2,367,000	50,913,000	130,759,000	95.1	2,031,100	54,536,000	135,707,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1½ cents a gallon on gasoline and 4 cents on lubricating oils, which became effective June 17, 1933.

Refinery Gasolines

	Sept. 12		Sept. 5	
OKLAHOMA (Group 3)—				
*U. S. Motor grades:				
Regular	.05¼	.05½	.04¾	.05¼
Premium	.06		.05¼	.05¾
Third grade	.05		.03⅞	.04¼
60-62 400 grades:				
Regular	.05⅝	.05⅝	.04⅞	.05⅜
Premium	.06	.06⅛	.05⅝	.05¾
Third grade	.05		.04	.04⅜
64-66 390	.05¼		.04¼	.04½
64-66 375	.05⅜		.04⅜	.04⅝
68-70 350	.05½		.04⅝	.05
NORTH TEXAS—				
U. S. Motor grades:				
Regular	.05⅛	.05⅜	.04½	.05
Premium	.05¾	.05⅞	.05	.05¼
Third grade	.04¾	.05	.03⅞	.04
60-62 400	.05	.05¼	.04	.04¼
64-66 390	.05⅛		.04⅛	
64-66 375	.05¼		.04½	
64-66 360	.05½		.04½	.05
†NORTH LOUISIANA—				
U. S. Motor grades:				
Regular	.05½	.05¾	.05	
Premium	.06¼		.05½	.05¾
Third grade	.05¼		.04½	.04¾
60-62 400	.05⅝	.05½	.04¾	
†ARKANSAS—				
U. S. Motor grades:				
Regular	.05½	.05¾	.05	.05¼
Premium	.06¼		.05½	.05¾
Third grade	.05⅝		.04½	
CHICAGO (based on Oklahoma Group 3)—				
U. S. Motor grades:				
Regular	.05	.05½	.04¾	.05¼
Premium	.05½	.06	.05¼	.05¾
Third grade	.04¾	.05	.04	.04¼
60-62 400	.04⅞		.04¼	.04⅝
64-66 375	.05	.05¼	.04¼	.04½
68-70 360	.05¼	.05⅝	.04⅝	.04⅝
Aviation fighting grade	.05¾	.06	.05⅞	.05⅝

***Octane Ratings**—The following octane ratings apply to the three grades of U. S. Motor gasoline: Regular 60-64 octane number, premium 65 and above octane number; third grade, 59 and below octane number. Octane ratings determined by C.F.R. Motor Method.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.05½	.05¾	.05½	.05⅝
60-62 400	.05⅝	.05⅞	.05⅝	.05¾
64-66 375	.06	.06¼	.06	.06¼
68-70 350	.06¼	.06½	.06¼	.06½
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.07	.08	.06	.07
58-60 400	.07¾	.08¾	.07	.08
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.0625	.0665	.0575	.06
Philadelphia	.0650	.0675	.06	
Boston	.0670		.0595	.0615
Baltimore	.0625	.0650	.0575	.06
Charleston, S. C.	.0625	.0650	.06	
U. S. Motor, 65 and above:				
New York (Bayonne)	.0690	.07	.06	.0640
Philadelphia	.0650	.07	.0625	
Boston	.0695		.0615	.0645
Baltimore, Md.	.0675	.07	.06	.0625
Charleston, S. C.	.0650	.07	.0575	
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.05½	.05⅝	.05¼	.05½
U. S. Motor, below 65 octane number	.05⅛	.05¼	.05	.05⅛

Naphthas

OKLAHOMA (Group 3)—	Sept. 12		Sept. 5	
50-52 450 (blending)	.04	.04½	.03½	.03⅝
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.05	.05¼	.05	.05¼
†ARKANSAS—				
48-50 (blending)	.04	.04¼	.04	.04¼
CHICAGO (based on Oklahoma Group 3)—				
50-52 450 (blending)	.04	.04½	.04	.04½
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06	.06¼	.06	.06¼
Lacquer diluent, 180 i.b.p.-250 e.p.	.07¼	.07½	.07¼	.07½
Lacquer diluent, 140 i.b.p.-200 e.p.	.08¼	.08½	.08¼	.08½
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06	.06¼	.06	.06¼
Stoddard solvent, 300 i.b.p.-410 e.p., over 33° flash	.05½	.05¾	.05½	.05¾
Pet. thinner, 290-300 i.b.p.-415 e.p., over 33° flash	.05	.05¼	.05	.05¼
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.05¾	.06	.05¾	.06
Petroleum spirits	.04¾	.05	04¾	.05

Natural Gasolines

OKLAHOMA (Group 3)—	Sept. 12		Sept. 5	
Grade 18-55	.04¾		.04	
Grade 26-70	.04¼	.04½	.03½	
Grade 30-70	.04½		.03⅝	
Low vapor pressure grades:				
15 lb. v.p. (max.)	.05½		.04⅜	.04½
11 lb. v.p. (max.)	.06	.06¼	.04¾	
NORTH TEXAS—				
Grade 18-55	.04⅝	.04¾	.04	
Grade 26-70	.04⅛	.04¼	.03½	.03⅝
Grade 30-70	.04		.03⅜	.03½
Low vapor pressure grades:				
15 lb. v.p. (max.)	.05½		.04⅜	
11 lb. v.p. (max.)	.06¼		.04⅝	.04¾
NORTH LOUISIANA—				
Grade 26-70	.04⅜		.03¾	.04
CALIFORNIA—				
75-78 375	.05¾	.06¾	.05¼	.06¼

Kerosenes

(All kerosenes water white)

OKLAHOMA (Group 3)—	Sept. 12		Sept. 5	
41-43	.03	.03½	.02½	.02¾
42-44	.03¼	.03¾	.02⅝	.02⅞
NORTH TEXAS—				
40-41	.02¾	.02⅞	.02⅜	.02½
41-43	.02⅞	.03¼	.02½	.02⅝
†NORTH LOUISIANA—				
41-43	.03½	.03¾	.03	.03¼
42-44	.03¾		.03¼	
†ARKANSAS—				
41-43	.03½	.03¾	.03¼	
PENNSYLVANIA (inland refineries)—				
45	.04¼	.04⅜	.04½	.04¼
46	.04⅝	.04⅝	.04⅝	.04⅝
47	.04½	.04¾	.04½	.04¾
CHICAGO (based on Oklahoma Group 3)—				
41-43	.02¾	.03	.02⅝	.02¾
42-44	.02⅞	.03	.02¾	.02⅞
*CALIFORNIA—				
38-40 high burning test	.04	.04½	.04	.04½
NEW YORK (Bayonne, N. J.)—				
41-43	.05¼	.05½	.05	.05½
GULF COAST (domestic)—				
41-43 water white	.04	.04¼	.04	

*For Pacific Coast consumption.
†For Arkansas, Louisiana and Mississippi delivery.

Furnace Oils and Tractor Fuels

OKLAHOMA (Group 3)—	Sept. 12		Sept. 5	
32-36 straw	.02¾	.03⅛	.02⅛	
36-38 straw	.02⅝		.02	.02⅛
38-40 straw	.02¾	.03	.02⅛	.02¼
39-41 prime	.02⅞	.03	.02¼	.02⅝
NORTH TEXAS—				
38-40 straw	.02⅝		.02	.02⅛
†NORTH LOUISIANA—				
36-40	.02⅞	.03	.02½	.02⅝
†ARKANSAS—				
32-36	.02⅞	.03	.02½	.02⅝
CHICAGO (based on Oklahoma Group 3)—				
32-36 straw	.02¼		.02⅛	.02¼
38-40 straw	.02½	.02⅝	.02¼	.02⅝
38-40 prime white	.02⅝	.02¾	.02⅝	.02½
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03¾	.04	.03¾	.04
NEW YORK (Bayonne, N. J.)—				
32-36	.04	.04½	.04	
36-40	.05	.05½	.05	
21 (industrial)	.03½	.04	.03½	

Above prices are for distillate oils of zero cold test under 190° flash and good odor.
†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil quoted per gallon basis; Diesel oil and fuel oil per barrel.

OKLAHOMA (Group 3)—	Sept. 12		Sept. 5	
32-36 gas oil cracking stock	.01⅞	.02⅛	.01½	.01⅝
U.G.I. gas oil	.02		.01½	
32-36, zero to 15 gas oil high flash	.02¼		.01¾	.01⅞
28-30, zero to 10 fuel oil	.75	.80	.70	.75
26-30, zero to 10 fuel oil	.75		.65	.70
24-26 fuel oil	.55	.60	.50	.55
20-22 fuel oil	.50	.55	.45	.50
Below 16 fuel oil	.45	.50	.40	.45
NORTH TEXAS—				
32-36 gas oil, industrial	.02		.01⅝	.01½
22-26 fuel oil	.55	.60	.50	.55
Below 20 fuel oil	.45		.40	.45
†NORTH LOUISIANA—				
32-36 gas oil, zero	.02¾	.03	.02½	
14-16 fuel oil	.45	.55	.35	.45
†ARKANSAS—				
30-32 gas oil, zero	.02½	.03	.02½	
14-16 fuel oil	.45	.55	.35	.45
CHICAGO (based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.01¾	.01⅞	.01½	.01¾
28-30 (zero) fuel oil	.75	.85	.75	.85
26-28 (zero) fuel oil	.67½	.75	.67½	.75
22-26 (zero) fuel oil	.62½	.65	.62½	.65
18-22 (zero) fuel oil	.57½	.60	.57½	.60
Below 18 fuel oil	.40	.45	.40	.45

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel less in all areas than shown in above tables.
†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
36-40	.03½		.03½	
CALIFORNIA—				
30-34 gas oil per bbl.	.85	.95	.85	.90
27 plus Diesel	.85	.95	.80	.90
15-19 bunker (at tidewater)	.50	.65	.50	.60
15-19 (cargo lots)	.50	.60	.45	.55
15-19 (tank cars)	.45	.55	.40	.50
GULF COAST—				
28-30 gas oil	.03	.03¼	.03	.03⅛
28-30 Diesel	1.60		1.60	
Bunker C (bulk cargoes)	.92½	.95	.70	.75
Bunker C (bunkers)	.95		.80	
NEW YORK (Bayonne, N. J.)—				
28 plus, gas oil	.04		.04	
*28-30 Diesel	1.75		1.75	
28-30 Diesel (tank cars)	.04		.04	
†Bunker C	1.05	1.10	.90	.95

*Lighterage 6½ cents per barrel.
†Contract price at New York Harbor to ocean-going steamships only.

Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

	Sept. 12		Sept. 5	
Breeze (screenings)	5.25		5.25	
Still runs	6.25		6.25	
Lump and egg	7.00	7.25	7.00	7.25

*Refineries will absorb freight to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

OKLAHOMA (Group 3)—	Sept. 12		Sept. 5	
Zero to 10 Cold Test:				
150-3	.07¼	.07½	.07¼	.07½
180-3	.08½	.08¾	.08½	.08¾
180-4	.08¼	.08½	.08¼	.08½
200-3	.09	.09¼	.09	.09¼
200-4	.08¾	.09	.08¾	.09
240-3	.11	.11¼	.11	.11¼
240-4	.10¾	.11	.10¾	.11
280-3	.12	.12¼	.12	.12¼
280-4	.11½	.11¾	.11½	.11¾
300-3½	.12¾	.13	.12¾	.13
350-3½	.13¾	.14	.13¾	.14
400-4	.14¾	.15	.14¾	.15
500-4½	.15¾	.16	.15¾	.16
100-2 paraffin oil	.05¼	.05½	.05¼	.05½
15-30 Cold Test:				
200-3	.08¼	.08½	.08¼	.08½
200-4	.08	.08¼	.08	.08¼
240-3	.10¼	.10½	.10¼	.10½
240-4	.10	.10¼	.10	.10¼
280-3	.11¼	.11½	.11¼	.11½
280-4	.11	.11¼	.11	.11¼
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.17	.17½	.17	.17½
10 pour test	.16½	.16¾	.16½	.16¾
15 pour test	.15	.15½	.15	.15½
25 pour test	.14¼	.14½	.14¼	.14½
180 vis., No. 3, 25 pour test	.16¾	.17	.16¾	.17
200 vis., No. 3:				
Zero pour test	.21½	.21¾	.21½	.21¾
10 pour test	.20½	.20¾	.20½	.20¾
15 pour test	.19½	.19¾	.19½	.19¾
25 pour test	.19¼	.19½	.19¼	.19½
GULF COAST—				
Pale Oils:				
100-2-2½	.04½		.04½	
200-3	.05¾	.06	.05¼	.05½
300-3	.07		.06½	.06¼
500-3½	.08½	.08¾	.08½	.08¾
750-3½	.09¼	.09¾	.09¼	.09¾
1,200-3½	.10	.10½	.10	.10½
2,000-4	.11	.11¼	.11	.11¼
Red Oils:				
200-5-6	.04½		.04½	
300-5-6	.06	.06¼	.05¼	.05½
500-5-6	.07¼	.07½	.07¼	.07½

750	.08¼	.08½	.08¼	.08½
1,200-5-6	.09	.09½	.09	.09½
2,000-6 plus	.10	.10¼	.10	.10¼
CALIFORNIA—				
Pale Oils:				
100-2½-3	.09	.09½	.09	.09½
200-2½-3	.09½	.10	.09½	.10
300-3-3½	.10½	.11	.10½	.11
350-3-4	.11	.11½	.11	.11½
400-3-4	.11½	.11¾	.11½	.11¾
450-3-4	.11¾	.12	.11¾	.12
550-3-4	.12	.12½	.12	.12½
Red Oils:				
200-4-5	.09½	.10	.09½	.10
300-5-6	.10½	.11	.10½	.11
350-5-6	.11	.11½	.11	.11½
400-5-6	.11½	.11¾	.11½	.11¾
450-5-6	.11¾	.12	.11¾	.12
500-5-6	.12	.12¼	.12	.12¼
600-5-6½	.12¼	.12½	.12¼	.12½
700-6½ plus	.12½	.12¾	.12½	.12¾
750-6½ plus	.12¾	.13	.12¾	.13
900-6½ plus	.13	.14	.13	.14

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Sept. 12		Sept. 5	
630 light green	.06¾	.07¾	.06¾	.07¾
600 light green S.R.	.06¼	.07¼	.06¼	.07¼
600 dark green S.R.	.04¾	.05¾	.04¾	.05¾
Bright Stocks:				
190-200 D	.24	.25	.23½	.24½
150-160 D, 0-10	.22¼		.21¾	
150-160 D, 10-25	.21¾		.21¼	
150-160 D, 25-40	.21¼		.20¾	
150-160 E	.20¼		.19¾	
PENNSYLVANIA—				
600 S.R.	.15	.15¼	.15	.15¼
650 S.R.	.17¼	.17½	.17¼	.17½
600 Pennsylvania flash	.18¼	.18½	.18¼	.18½
650 D filtered	.23¼	.23½	.23¼	.23½
600 E filtered	.18¾	.19	.18¾	.19

Pennsylvania Grade bright stock:				
No. 8 color, 145-50 vis., at 210; 540-550 flash:				
10 pour test	.27½	.27¾	.27½	.27¾
15 pour test	.26	.26½	.26	.26½
25 pour test	.25	.25½	.25	.25½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Sept. 12		Sept. 5	
124-126 white crude scale	.03¼	.03½	.03¼	
PENNSYLVANIA—				
122-124	.03⅜	.03½	.03⅜	.03½
124-126	.03⅜	.03½	.03⅜	.03⅝
NEW YORK HARBOR—				
120-122 (a.m.p. basis)	.0350		.0350	
125-127	.0375		.0375	
130-132	.0420		.0420	
133-135	.0480		.0480	
135-137	.05		.05	
Petrolatum in barrels in carload lots:				
Dark green	.02	.02½	.02	.02½
Amber	.02¼	.02⅝	.02¼	.02⅝
Extra amber	.02⅝		.02⅝	
Lily white	.06	.06¼	.06	.06¼
Snow white	.07	.07¼	.07	.07¼
Cream	.04¼	.05	.04¼	.05
CHICAGO (f.o.b. switching district)*—				
122-124	.0390	.0400	.0390	.0400
125-127	.0415	.0425	.0415	.0425
127-129	.0430	.0440	.0430	.0440
130-132	.0490	.0500	.0490	.0500
132-134	.0515	.0525	.0515	.0525

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx.
Add 3° F. for a.m.p.

Export Prices

GASOLINE

GULF COAST—	Sept. 12	Sept. 5
U. S. Motor	.05	.04¼
60-62 400	.05¼	.04⅝ .04½
61-63 390	.05¼	.04⅝ .04½
64-66 375	.05¼ .05½	.04½ .04¾
LOS ANGELES, CALIF.—		
U. S. Motor, 53-55 437 e.p.	.04½ .05	.04 .04½
U. S. Motor, 65 octane	.05 .05¼	.04½ .04¾
U. S. Motor, 67 octane	.05½ .06	.05
U. S. Motor, 69 octane	.06¼ .06¾	.05¼
58-60 400 endpoint gasoline	.05 .06	.04½ .05

KEROSENE

GULF COAST—		
41-43 prime white	.04¼	.04½
41 water white	.04½	.04½
LOS ANGELES, CALIF.—		
41-43 water white	.03¾ .04¼	.03¾ .04¼

LUBRICANTS

NEW YORK (f.a.s. in bbls.)—		
600 Warren E	.24½	.24½
600 S.R. unfiltered	.20¾	.20¾
650 S.R. unfiltered	.22½	.22½
600 flash S.R.	.24	.24
630 flash S.R.	.29	.29
Bright stock, No. 8 color	.31	.31
Bright stock, No. 6½ color, dil.	.30½	.30½

NEUTRALS

NEW YORK—Pale Engine Oil, Bulk (vis. at 100)—		
230-3¾	.10¾	.10¾
180-3¼	.10½	.10½
100-2¼	.06	.06
Red Engine Oil, Bulk (vis. at 100):		
300-6½	.10½	.10½
250-6	.09½	.09½
200-6	.08¾	.08¾

PARAFFIN WAX (Fully Refined)

NEW YORK (prices per pound)—				
123-125 a.m.p.	.03⅞	.04	.03⅞	.04
125-127 a.m.p.	.03⅞	.04	.03⅞	.04
130-132 a.m.p.	.0440	.0450	.0440	.0450
133-135 a.m.p.	.0495	.05	.0495	.05
135-137 a.m.p.	.05	.0520	.05	.0520

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas	$.99
Stratman, Kans. (Sept. 8, 1933)†	.97
Corsicana (heavy) (June 17, 1933)*	.20
Other fields	(See gravity table)

Note—In East Texas, effective September 8, 1933, Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Texas Co., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co. and Empire Oil & Refining Co.
*Magnolia Petroleum Co. †Eldorado Refining Co.

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and and Pecos Counties, and Lea County, New Mexico (See note) $.60
Toborg, Pecos County (June 20, 1933)* .25
Jones and Fisher Counties (See gravity table

Note—Effective September 8, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.
*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers (See gravity table) $1.05
Tomball (See note)* .85
Livingston (Aug. 25, 1933)† .55
Greta (Sept. 8, 1933)† .75
Refugio, light (See gravity table)
Refugio, heavy (Sept. 8, 1933)‡ .75
Markham and High Island (See Gulf Coast gravity table)
Conroe (See Conroe gravity table)

Note—Tomball effective September 8, by Humble Oil & Refining Co. and Magnolia Petroleum Co.
*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy, by Humble Oil & Refining Co.

South Central and Southwest Texas

(See note below table)

Darst Creek	$.77
Mirando	.70
Luling (Aug. 25, 1933)	.65
Pettus	.95
Salt Flat	.77
Lytton Springs (Sept. 8, 1933)	.85
Duval County (Sept. 8, 1933)	.70
Saxet	.75

Note—Effective on September 8 by Humble Oil & Refining Co. in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 8 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Magnolia Petroleum Co., effective September 8, posted 74 cents in Darst Creek. Effective in Mirando September 8 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 8 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs, by Magnolia Petroleum Co. Duval County by Texas Co.; Saxet, effective September 8 by the Humble Oil & Refining Co. and Texas Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.60
Urania, La. (Sept. 11, 1933)	.85
Nevada, Ark. (Sept. 8, 1933)	.50
East El Dorado (Sept. 8, 1933)	.60
Other fields (See gravity table)	

Note—Smackover: Effective September 8, 1933, Texas Co. and Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. Effective August 26, Phillips Petroleum Co., 35 cents. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co. Nevada by Standard Oil Co. of Louisiana, Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co.

Eastern States

SOUTH PENN OIL CO.
(Effective September 6, 1933)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.35
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.12
Penna Grade Oil in Eureka Pipe Line Lines	2.07
Penna Grade Oil in Buckeye Pipe Lines	1.92
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Sept. 11, 1933)	1.20

(Continued on Page 31)

Crude Oil Gravity Table

Degrees in gravity—	1 Oklahoma and Kansas	2 North Texas, Central Texas and East Central Texas	3 North Louisiana and Arkansas	4 Gray County, Texas	5 Carson, Hutchinson and Moore Counties, Texas	6 Conroe, Texas	7 Salt Creek, Wyoming	8 Gulf Coast, Texas-Louisiana	9 Gulf Coast, Texas-Louisiana	10 Caddo, Louisiana	11 Sabine-DeSoto, Louisiana	12 Homer, Louisiana	13 Sarepta-Carterville, Louisiana	14 El Dorado, Arkansas	15 Haynesville, Louisiana	16 Miller County, Arkansas
Below 20	....	....	....	....	....	....	....	$.69	$.69	....	....	....	....	....	....	....
20-20.9	....	....	....	....	....	....	....	.71	.71	....	....	....	....	....	....	....
21-21.9	....	....	....	....	....	....	....	.73	.73	....	....	....	....	....	....	....
22-22.9	....	....	....	....	....	....	....	.75	.75	....	....	....	....	....	....	....
23-23.9	....	....	....	....	....	....	....	.77	.77	....	....	....	....	....	....	....
24-24.9	....	....	....	....	....	....	....	.79	.79	....	....	....	....	....	....	....
Below 25	*$.65	....	....	....	....	....	....	....	....	$.55	$.62	$.61	$.65	$.67	$.57	$.51
25-25.9	*.67	....	....	....	....	....	....	.81	.81	.57	.64	.63	.67	.69	.59	.53
26-26.9	*.69	....	....	....	....	....	....	.83	.83	.59	.66	.65	.69	.71	.61	.55
27-27.9	*.71	....	....	....	....	....	....	.85	.85	.61	.68	.67	.71	.73	.63	.57
28-28.9	*.73	....	....	....	....	....	....	.87	.87	.63	.70	.69	.73	.75	.65	.59
Below 29	.73	$.68	$.68	....	....	....	$.73	....	....	....	....	....	....	....	....	....
29-29.9	.75	.70	.70	....	....	....	.75	.89	.89	.65	.72	.71	.75	.77	.67	.61
30-30.9	.77	.72	.72	....	....	....	.77	.91	.91	.67	.74	.73	.77	.79	.69	.63
31-31.9	.79	.74	.74	....	....	....	.79	.93	.92	.69	.76	.75	.79	.81	.71	.65
32-32.9	.81	.76	.76	....	....	....	.81	.95	.93	.71	.78	.77	.81	.83	.73	.67
33-33.9	.83	.78	.78	....	....	....	.83	.97	.94	.73	.80	.79	.83	.85	.75	.69
34-34.9	.85	.80	.80	....	....	....	.85	.99	.95	.75	.82	.81	.85	.87	.77	.71
Below 35	....	....	....	$.64	$.59	....	....	....	....	....	....	....	....	....	....	....
35-35.9	.87	.82	.82	.66	.61	$.99	.87	....	.96	.77	.84	.83	.87	.89	.79	.73
36-36.9	.89	.84	.84	.68	.63	1.01	.89	....	.97	.79	.86	.85	.89	.91	.81	.75
37-37.9	.91	.86	.86	.70	.65	1.03	.91	....	.98	.81	.88	.87	.91	.93	.83	.77
38-38.9	.93	.88	.88	.72	.67	1.05	.93	....	.99	.83	.90	.89	.93	.95	.85	.79
39-39.9	.95	.90	.90	.74	.69	1.07	.95	....	1.00	.85	.92	.91	.95	.97	.87	.81
40 and over	.97	.92	.92	.76	.71	1.09	.97	....	1.01	.87	.94	.93	.97	.99	.89	.83

*The following companies, purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedules: Below 25 degrees, 50 cents; 25-25.9 degrees, 52 cents, with 2 cents added for each degree upward to 40 and over at 82 cents: Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co. All others begin their schedule at below 29 degrees, 58 cents, excepting Philtex Oil Co. which begins with below 31 degrees at 64 cents.

Column 1—Effective September 8, Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Barnsdall Refineries, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; The Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas. Effective September 9, Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Philtex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas and White Eagle Oil Corp. in Kansas.

Column 2—Effective September 8, Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., The Texas Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co. Effective September 9, Continental Oil Co. Effective September 9, in the Van Pool in Van Zandt Field, Pure Oil Co. posted same prices as in Oklahoma beginning with below 29 degrees, 75 cents, with 2 cents added for each degree up to 40 and over at 97 cents.

Column 3—Effective September 8, The Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective September 8, Stanolind Oil & Gas Co. in Pine Island in Louisiana and Marion County, Texas, below 25 degrees, 55 cents, with 2 cents added for each degree up to 40 and over at 87 cents. For Standard Oil Co. of Louisiana prices see Columns 10 to 16 inclusive.

Column 4—Effective September 8, Humble Oil & Refining Co., The Texas Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., Wilcox Oil & Gas Co. Effective September 9, Philtex Oil Co., below 31 degrees, 61 cents, with 2 cents added for each degree up to 40 and over at 81 cents.

Column 5—Effective September 8, Humble Oil & Refining Co., Gulf Pipe Line Co., The Texas Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co. Effective September 9, Continental Oil Co. Effective September 9, Philtex posted below 31 degrees, 51 cents, with 2 cents added for each degree upward to 40 degrees and over at 71 cents.

Column 6—Effective September 8, Humble Oil & Refining Co., The Texas Co. and Tide Water Oil Co.

Column 7—Effective September 8, Stanolind Oil & Gas Co.

Column 8—Effective September 8, Humble Oil & Refining Co., Gulf Pipe Line Co., Pure Oil Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co. Effective September 8, Sun Oil Co. posted below 30 degrees, 72 cents, with 2 cents added for each degree up to 40 and over at $1.09. Effective September 8, Magnolia Petroleum Co. posted Lockport, below 20 degrees, 66 cents, with 2 cents added for each degree up to 34 and over at 96 cents; Iowa, La., below 20 degrees, 56 cents, 2 cents added for each degree up to 34 and above at 86 cents.

Column 9—The Texas Co.

Columns 10, 11, 12, 13, 14, 15 and 16—Effective September 8, Standard Oil Co. of Louisiana and Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 31)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

September 12, 1933

Taxes

The gasoline quotations given in the following tables include the 1½-cent Federal tax effective June 17, 1933, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third or competitive grade is available at 1 or more cents per gallon under the service station price for the regular grade. Ethyl Gasolines are sold 2 cents above the service station price for the regular grade.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Atlanta, Ga.	23.0	23.0	7.5	19.0
Augusta	23.0	23.0	7.5	13.0
Macon	23.0	23.0	7.5	13.0
Savannah	23.0	23.0	7.5	14.0
Birm'ham, Ala.	25.0	26.0	8.5	13.0
Mobile	23.0	23.0	8.5	10.0
Montgomery	26.0	26.0	8.5	14.9
Jackson, Miss.	22.0	22.0	7.5	11.0
Vicksburg	21.0	21.0	7.5	11.0
Jack'ville, Fla.	23.0	23.0	8.5	12.5
Miami	23.0	23.0	8.5	13.5
Pensacola	23.0	23.0	8.5	13.5
Tampa	23.0	23.0	8.5	12.5
Lexington, Ky.	22.0	22.0	6.5	10.0
Covington	21.0	21.0	6.5	11.5
Louisville	20.0	20.0	6.5	10.0
Paducah	22.0	22.0	6.5	9.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2½ cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1-cent state tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1-cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Dallas, Tex.	15.5	18.5	5.5	7.5
Fort Worth	15.5	18.5	5.5	7.5
Houston	15.5	18.5	5.5	8.0
El Paso	16.0	19.0	5.5	8.0
San Antonio	16.0	19.0	5.5	8.0
Texarkana	*18.0	18.0	5.5	†11.0
Muskogee	16.0	19.0	5.0	7.0
Okla. City	16.0	19.0	5.5	7.5
Tulsa	15.0	19.0	5.5	7.0
Ft. Smith, Ark.	‡16.9	16.9	5.5	†10.0
Little Rock	19.4	19.4	7.5	†10.0

*Less 2½ cents to dealers. †Less 2 cents to dealers. ‡Less 4½ cents to dealers.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Chicago	17.8	17.8	4 5	8.7
Decatur, Ill.	18.2	18.2	4 5	9.2
E. St. Louis	17 5	17.5	4 5	8.5
Joliet	18.2	18.2	4.5	9.2
Peoria	18.2	18.2	4.5	9 2
Quincy	15.8	15.8	4 5	9.0
Davenport, Ia.	18.1	18.1	4 5	9.1
Des Moines	18.1	18.1	4 5	8.0
Mason City	18.1	18.1	4 5	9.1
Sioux City	17.7	17.7	4 5	8 7
Duluth, Minn.	18.7	18.7	4 5	9 4
Mankato	18.3	18.3	4.5	9.3
Minneapolis	18.4	18.4	4 5	9.4
LaCrosse, Wis.	19.8	19.8	5.3	9.8
Green Bay	19.2	19.2	5 5	9.2
Milwaukee	18.7	18.7	5 5	8.7
Madison	18.9	18.9	5.5	8 9
Detroit, Mich.	18.0	18.0	4.5	9.5
Grand Rapids	18.2	18.2	4 5	9.2
Saginaw	18.5	18.5	4.5	9.5
Evansville, Ind.	19.0	19.0	5.5	9.0
Indianapolis	19.2	19.2	5.5	9.2
South Bend	19.5	19.5	5.5	9.5
Fargo, N. Dak.	20.1	20.1	4.5	11.1
Huron, S. Dak.	20.4	20.4	5.5	10.4
Sioux Falls	19.9	19.9	5 5	9 9
K. C., Mo.*	17.2	17.2	4.5	6.5
Springfield*	17.1	17.1	4.5	8 1
St. Louis	16.2	16.2	4.0	7 7
St. Joseph*	16.8	16.8	4 5	7.9
Wichita, Kans.	16.1	16.1	4.5	7.1
Bartlesville, Ok.	16.5	17.5	5.5	8.5

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

Effective June 1, 1933—Discounts off tank wagon price to consumers on 500 gallons or more per month in territory outside of Chicago metropolitan area: 2 cents on Ethyl and Red Crown gasolines, and 1 cent on Stanolind gasoline. One-half cent additional discount in Chicago division.

Effective July 1, 1933—Discounts on resellers authorized agent's agreement made off the service station price throughout the territory as follows: 2.5 cents on Red Crown Ethyl and Standard Red Crown gasolines, and 1.5 cents on Stanolind gasoline. Half of reduction from normal service station price shall be absorbed by resellers up to maximum of 1 cent on all grades.

Stanolex Furnace Oil in Chicago

Effective July 27, 1933, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), under 100 gallons, 7¾ cents; No. 2 (30-34 stw. zero), 7¼ cents; No. 3 (22-26 zero), 6¾ cents; No. 4 (12-16 zero), 5¾ cents. Viscosity of No. 4, 90-115 at 100° F.: No. 5, 5½ cents; for deliveries of 100 gallons or more deduct 1 cent.

Naphtha

	Tank-Wagon	Car
Oleum spirits	11.9	6.28
V.M.&P. naphtha	13.9	6.78
Cleaners' naphtha	13.0	9.28
Stanisol	13.0	9.28

Tank wagon prices f.o.b. Chicago, January 6, 1933. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Atlantic Coast District

(Effective September 2)

STANDARD OIL CO. (NEW JERSEY)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Atl'tic City, N.J.	19.2	18.7	4.5	9.0
Newark	18.5	18.0	4.5	8.5
Annapolis, Md.	19.8	19.3	5.5	9 0
Baltimore	19.3	18.8	5.5	8.0
Cumberland	20.8	20.3	5.5	11.7
Wash'g'n, D. C.	17.5	17.0	3.5	10 0
Danville, Va.	21.9	21.4	6.5	10.9
Norfolk	20.4	19.9	6 5	10.3
Petersburg	21.2	20.7	6.5	10.7
Richmond	20.8	20.3	6 5	10.7
Roanoke	22.0	21.5	6.5	11.0
Charls'n, W.Va.	20.2	19.7	5.5	11.6
Parkersburg	19.5	19.0	5.5	10.2
Wheeling	20.2	19.7	5.5	11.2
Charlotte, N. C.	23.6	23.1	7.5	12 5
Hickory	23.9	23.4	7.5	12 7
Mt. Airy	23.9	23.4	7.5	12.8
Raleigh	23.4	23.9	7.5	12 2
Salisbury	23.7	23.2	7.5	12.6
Charleston, S.C.	21.4	20.9	7.5	10.2
Columbia	23.2	22.7	7.5	12 2
Spartanburg	23.6	23.1	7.5	12.5

Note—Dealer contracts for gasoline are written at 2½ cents over the posted tank car price. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey and Baltimore, Md.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
N. Orleans, La.	20.3	19.8	*7.5	†12.0
Baton Rouge	19.5	19.0	6.5	†11.0
Alexandria	20.4	19.9	*7 5	†11.0
Lafayette	20 6	20.1	*7.5	†11.0
Lake Charles	20.5	20.0	*7.5	†11.0
Shreveport	18.3	17.8	6.5	†11.0
Knoxville, Tenn.	23.7	23.2	8.5	12 5
Memphis	22.1	21.6	8 5	10.0
Chattanooga	23.4	22.9	8.5	10.0
Nashville	23.0	22.5	8.5	10.0
Bristol	24.1	23 1	8 5	13.0
Lt. Rock, Ark.	21.4	20.9	8.5	19.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

Effective June 2, 1933, station prices fixed at 7 cents above basic tank car price at key refining points in territory. Commercial consumers for tank wagon delivery pay following amounts over tank car price basis yearly deliveries:

1,000 to 75,000 gallons	2.5
75,000 to 300,000 gallons	1 5
Over 300,000 gallons	1.0

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero.
	Tank truck†	Posted retail	Incl'ds tax	tank wagon
Fresno, Calif.	19.0	21.5	4.5	14 0
San Francisco	18.0	20.5	4.5	12.5
Los Angeles	17.5	20.0	4.5	12.5
Reno, Nev.	21.0	23.5	5.5	15.5
Portland, Ore.	21.0	23.5	5.5	13.5
Seattle, Wash.	21.0	23.5	6.5	13.5
Tacoma	21.0	23.5	6.5	13.5
Spokane	24.0	26.5	6.5	18.0
Phoenix, Ariz.	19.0	21.5	6.5	‡16.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent. ‡Includes 5-cent state tax.

New York and Part of New England District

STANDARD OIL CO. OF NEW YORK

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Albany, N. Y.	17.1	18.1	4.5	9.0
New York	16.9	17.9	4.5	8.0
Buffalo	17.7	18.7	4.5	9.0
Rochester	17.8	18.8	4.5	9.0
Syracuse	17.6	18.6	4.5	9.5
Boston, Mass.	17.0	18.0	4.5	8.0
Augusta, Me.	18.4	19.4	5.5	9.0
Manch'tr, N. H.	19.2	20.2	8.5	8.0
Burlington, Vt.	19.8	20.8	5.5	8.5

Pennsylvania-Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Pittsburgh, Pa.	16.5	17.5	4.5	9.0
Philadelphia	16.5	17.0	4.5	9.0
Scranton	16.5	17.5	4.5	9.0
Allentown	16.5	17.5	4.5	9.0
Altoona	16.5	17.5	4.5	9.0
Erie	16.5	17.5	4.5	9.0
Dover, Del.	16.5	17.5	4.5	9.0
Wilmington	16.5	17.5	4.5	9.0
Springf'd, Mass.	18.1	19.1	4.5	8.9
Worcester	18.0	19.0	4.5	8.0
Boston	17.5	18.5	4.5	8.0
Providence, R.I.	16.5	17.5	3.5	8.0
Hartford, Conn.	16.9	17.9	3.5	8.0
New Haven	16.7	17.7	3.5	8.0

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Denver, Colo.	18.0	20.5	5.5	11.5
Pueblo	18.0	20.5	5.5	13.0
Grand Jnctn.	20.0	22.5	5.5	13.0
Casper, Wyo.	19.0	21.5	5.5	10.5
Cheyenne	17.0	19.5	5.5	12.0
Butte, Mont.	22.5	25.0	5.6	17.5
Billings	22.0	24.5	6.5	16.0
Helena	24.0	26.5	6.5	17.5
Great Falls	24.0	26.5	6.5	17.5
Salt Lake, Utah	21.0	23.5	5.5	16.0
Boise, Idaho	24.0	26.5	6.5	15.0
Twin Falls	24 0	26.5	6.5	18.0
Albu'que, N. M.	18 5	21 5	*7.5	13.0

*One-cent city tax.

Effective June 1, 1933, dealers and lease and license accounts will receive 2½ cents discount on regular gasoline in Montana, Colorado, Wyoming, Utah and Idaho.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Ohio points	17.0	18.0	5.5	*12.5

*Includes state tax of 1 cent, effective July 22.

Canada*

IMPERIAL OIL, LTD.

Imperial 3-Star Gasoline

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Hamilton, Ont.†	25.5	26.5	6.0	16.5
Toronto, Ont.†	25.5	26.5	6 0	16.5
Brandon, Man.*	30.0	33.5	7.0	21.5
Winnipeg, Man.	27.0	30.5	7.0	18.5
Regina, Sask.	30.0	24.0	6.0	22.5
Saskatoon, Sask.	32.0	36.0	6.0	24.5
Edmonton, Alta.	30.5	34.5	6.0	22.5
Calgary, Alta.	27.0	31.0	6.0	20.0
Vanc'ver, B. C.†	29.0	32.5	6.0	22.0
Montreal, Que.	22.0	26.0	6.0	16.0
St. Johns, N. B.	25.5	29.5	7.9	21.5
Halifax, N. S.	24.5	28.5	6.0	21.5

*Imperial gallon used in Canada. †Dealer discount posted tank wagon on gasoline in Ontario and British Columbia subject to dealer's discount of 2 cents per gallon.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Omaha	18.8	19.3	5.5	9.8
McCook	18.8	19.8	5.5	9.0
Norfolk	19.3	20.3	6 5	10.3
N. Platte	20.3	21.3	5 5	11.0
Scottsbluff	19.8	19.8	5.5	10.0

Note: Discount to dealers and AAA commissions. From service station price: Red Crown Ethyl and Standard Red Crown gasoline, 3 cents. Reliance (third grade) gasoline, 2 cents. Rentals under lease and agents agreement, one-half cent per gallon additional.

Discount to consumers under contracts (large consumers under contracts and governmental units): On tank wagon deliveries of gasoline on monthly purchases of 500 gallons, or yearly purchases of 6,000 gallons, from the service station price: Red Crown Ethyl and Standard Red Crown Gasoline, 2 cents per gallon; Reliance (third brand) gasoline, 1 cent per gallon.

TANK WAGON CHANGES

Magnolia Petroleum Co., August 29, advanced the tank wagon price of gasoline one-half cent in Dallas, Fort Worth, Houston, El Paso, San Antonio and Texarkana. August 30 it raised the tank wagon price 1 cent in Muskogee and Oklahoma City. September 2 it reduced the tank wagon price 1½ cents in Fort Smith and Little Rock. August 29 the Magnolia advanced the service station price of gasoline 1 cent in Dallas, Fort Worth, Houston, El Paso and San Antonio. On the same date it advanced the service station price one-half cent in Texarkana. August 30 the company advanced the service station price 1 cent in Muskogee, Oklahoma City and Tulsa. September 2 it reduced the service station price 1½ cents in Fort Smith and Little Rock.

Standard Oil Co. (Indiana), September 7, advanced tank wagon and service station prices of gasoline one-half cent throughout its territory. September 9 it advanced tank wagon and service station prices 1 cent throughout its territory. September 13 the company advanced the tank wagon prices on special naphthas 2 cents, kerosene 2 cents and furnace oils one-half cent.

Standard Oil Co. of New Jersey, September 8, advanced tank wagon and service station prices of gasoline 1 cent throughout its territory.

Standard Oil Co. of Louisiana, September 8, advanced tank wagon and service station prices of gasoline 1 cent throughout its territory.

Standard Oil Co. of California, September 6, advanced tank wagon and service station prices of gasoline 1½ cents in Fresno, Phoenix and Los Angeles and 1 cent in San Francisco, Reno, Portland, Seattle, Tacoma and Spokane.

Continental Oil Co., September 2, advanced gasoline service station prices only in Colorado, Wyoming, Utah, Idaho, New Mexico and Montana.

Standard Oil Co. of Nebraska, September 4, advanced the tank wagon price of kerosene one-fifth cent. September 7 the company advanced the tank wagon and service station prices of gasoline one-half cent throughout its territory. September 9 it advanced tank wagon and service station prices 1 cent in Omaha, Norfolk, North Platte and Scottsbluff, Neb. On the same date it advanced the tank wagon price 2.3 cents and the service station price 3.3 cents in McCook, Neb. September 12 the company advanced the tank wagon price of kerosene 1 cent.

CRUDE OIL PRICE CHANGES

Details of the two general price changes made in the past week will be found on Page 10.

MONOVALVE DIESEL ENGINE

The American Diesel Engine Co., Oakland, Calif., has put on the market a Diesel engine of monovalve construction, using only one valve for each cylinder. This permits the use of conventional L-head design. This new 4-cylinder American Diesel operates at a rated speed of 1,200 r.p.m. and develops 75 horsepower at this speed. The fuel consumption at 75 horsepower is .44 pound per horsepower hour. Since the torque curve is so flat and the fuel consumption so complete, the manufacturers say it is practicable to run this engine over a speed range from 200 to 2,000 r.p.m. and still get a clear exhaust and a fuel consumption of less than .5 pound per horsepower hour. This means that there is in this Model 4-75, available horsepower, economically obtained, ranging from 35 to 125 horsepower. This covers a multitude of power applications.

NEWS FOR SALES DEPARTMENTS

Gasoline Use Increasing But Still Trailing 1932

Gasoline consumption in the United States in June, 1933, was 1,507,831,000 gallons, as compared with 1,532,927,000 gallons in the corresponding month of 1932, a falling off of 25,096,000 gallons, according to figures compiled by the American Petroleum Institute. The daily average consumption in June, 1933, was 50,261,000 gallons and in June, 1932, it was 51,098,000 gallons, a drop of 837,000 gallons. Substantial increases are noted in several states, including Connecticut, Oklahoma, Pennsylvania and Texas. California, however, with a decrease of almost 27,000,000 gallons in June consumption, went far to neutralize gains in other states. The June, 1933, consumption in the United States, as compared with the May, 1933, consumption, showed a pickup of 138,844,000 gallons. The consumption by states in June, 1933, and June, 1932, follows:

	Gallons	
	June, 1933	June, 1932
Alabama	11,917,000	11,934,000
Arizona	5,985,000	6,596,000
Arkansas	10,931,000	10,125,000
California	*125,205,000	152,103,000
Colorado	16,608,000	16,499,000
Connecticut	25,130,000	23,191,000
Delaware	3,221,000	2,842,000
Dist. of Columbia	9,230,000	9,442,000
Florida	16,286,000	16,378,000
Georgia	18,769,000	16,674,000
Idaho	5,472,000	5,577,000
Illinois	97,645,000	89,352,000
Indiana	44,636,000	44,962,000
Iowa	34,381,000	39,406,000
Kansas	40,446,000	41,683,000
Kentucky	15,636,000	14,874,000
Louisiana	14,627,000	14,380,000
Maine	11,065,000	11,745,000
Maryland	17,864,000	17,736,000
Massachusetts	55,381,000	54,169,000
Michigan	77,516,000	77,627,000
Minnesota	42,246,000	46,011,000
Mississippi	11,499,000	9,560,000
Missouri	44,716,000	46,422,000
Montana	7,486,000	7,106,000
Nebraska	19,599,000	21,948,000
Nevada	2,291,000	2,479,000
New Hampshire	6,715,000	6,572,000
New Jersey	73,285,000	68,887,000
New Mexico	4,660,000	4,448,000
New York	149,045,000	153,114,000
North Carolina	19,868,000	19,110,000
North Dakota	9,982,000	10,746,000
Ohio	87,009,000	90,013,000
Oklahoma	28,389,000	26,869,000
Oregon	15,231,000	15,954,000
Pennsylvania	98,401,000	97,214,000
Rhode Island	10,328,000	10,126,000
South Carolina	8,849,000	8,710,000
South Dakota	10,137,000	11,303,000
Tennessee	16,993,000	15,323,000
Texas	71,666,000	70,350,000
Utah	5,341,000	4,980,000
Vermont	4,568,000	4,987,000
Virginia	21,573,000	21,767,000
Washington	23,382,000	24,302,000
West Virginia	10,937,000	12,237,000
Wisconsin	40,423,000	41,127,000
Wyoming	3,960,000	3,966,000
Total	1,507,831,000	1,532,927,000
Daily average	50,261,000	51,098,000

ARMY OIL AWARDS

NEW YORK, Sept. 11.—The following contracts for petroleum have been awarded by the War Department:

Marshall Service Co., Cairo, Ill., 10,000 gallons of gasoline and 2,000 gallons of kerosene, $1,122, for delivery to U. S. Engineer at Memphis.

American Petroleum Co., Chicago, 8,000 gallons of avintion gasoline, $400, delivery to U. S. Engineer at Rock Island, Ill.

ROAD OIL MEETING

TULSA, Sept. 9.—George J. Stein of Miami, Okla., chairman of the Northeastern Oklahoma Highway Conference, was elected president of the National Road Oil Congress at a meeting of the executive committee yesterday morning. He succeeds Alvin Richards, who resigned.

The third annual congress will be held here Thursday and Friday, October 19 and 20.

Gulf Port Shipments During July Show Half Million Barrel Decline From June

HOUSTON, Tex., Sept. 11.—Reported shipments of crude oil and refined products from Gulf Coast terminals during July show a decline of more than 500,000 bbls., mostly due to the curtailed production that month in East Texas. Daily average production of that field for the month of July was 663,618 bbls., a decline of more than 200,000 bbls. from the previous month. The total amount of crude oil and refined products shipped from the coast by boat was 24,928,270.32 bbls. and in addition to this amount the bunker oil used for fueling ships totaled 245,415 bbls.

Movements of crude oil and refined products during the preceding month totaled 25,432,794.51 bbls., crude oil shipments being 11,595,188.40 bbls. and refined products 13,117,473.92 bbls. Petroleum coke shipments totaled 9,474 long tons. Shipment by companies and terminals follows:

GULF COAST WATER SHIPMENTS, JULY, 1933

	Crude		Refined		
Company, terminal—	Coastwise	Export	Coastwise	Export	Total
Atlantic, Atreco	963,467.78	158,684.56	.....	.....	1,122,152.34
Atlantic, Harbor Isl.	130,002.92	.....	.....	.....	130,002.92
Atlantic, Texas City	251,833.54	.....	3,630.36	.....	255,463.90
Gulf Ref., Port Arthur	273,630.80	.....	1,458,630.51	80,172.08	1,912,433.39
Humble, Baytown	589,152.00	.....	1,806,208.66	587,847.89	2,983,208.55
Humble, Harbor Isl.	1,661,028.00	.....	.....	.....	1,661,028.00
Humble, Ingleside	67,448.00	.....	.....	.....	67,448.00
Humble, Texas City	327,944.00	.....	.....	.....	327,944.00
Magnolia, Beaumont	†1,095,680.21	.....	†1,465,530.80	.....	2,561,211.01
Pure, Smith Bluff	403,406.00	.....	566,284.00	.....	969,690.00
Shell*, Houston	98,988.28	323,903.91	651,352.40	86,949.17	1,161,193.76
Shell, Norco	.....	.....	167,252.05	.....	167,252.05
Standard of La., Baton Rouge	139,920.00	36,765.00	1,362,121.00	143,498.00	1,672,214.00
Sun Co., Sabine Pass	1,426,350.40	.....	.....	.....	1,426,350.40
Texas Co., Pt. Arthur	1,134,974.00	739,507.00	2,196,556.00	695,556.00	4,766,593.09
Misc., Houston	1,658,465.00	240,375.00	1,765,125.00	80,120.00	3,744,085.00
Total July	10,312,290.92	1,499,235.47	11,442,690.78	1,674,053.14	24,928,270.32
Total June	12,194,249.17	1,250,072.81	10,107,060.93	1,881,411.60	25,432,794.51
Difference	1,881,958.24	249,162.66	1,335,629.85	207,358.46	504,524.19

*Shell Petroleum Corp. shipped petroleum coke for export that amounted to 9,474 long tons. No coastwise coke shipped.
†Includes export shipments.

Group Is Named to Choose Oil Marketers' Committee

E. J. Bullock, Standard Oil Co. (Indiana), has been appointed chairman of the nominating committee of 15 to propose names for the general committee of the Division of Marketing of the American Petroleum Institute at the fourteenth annual meeting of the Institute in Chicago, October 24 to 26, according to announcement of W. T. Holliday, marketing vice president. The 14 members named to serve with Mr. Bullock are directed by the Institute's uniform plan of divisional organization and procedure to nominate the 20 elective members of the general committee. Five other members of the general committee are required to be members of the Institute board of directors, and will be appointed by the president following the annual meeting.

Other members of the committee are H. T. Ashton, Lubrite Refining Co., St. Louis; W. C. Burns, Richfield Oil Corp. of New York, New York; H. A. Coffin, White Star Refining Co., Detroit; R. K. Davies, Standard Oil Co. of California, San Francisco; A. L. Derby, Derby Oil Co., Wichita; J. E. Dyer, Sinclair Refining Co., New York; J. P. Gruet, Texas Co., New York; C. J. Guzzo, Gulf Refining Co., Knoxville; C. F. Hatmaker, Pan American Petroleum & Transport Co., New York; C. L. Jones, Socony-Vacuum Corp., New York; F. S. Reitzel, Sun Oil Co., Philadelphia; W. A. Riley, Barnsdall Refining Co., Tulsa; Harold B. Stone, Atlantic Refining Co., Philadelphia; and T. H. Taylor, Standard Oil Co. of Louisiana, New Orleans.

GOLF TOURNAMENT POSTPONED

The date of the annual golf tournament to be held by the Oil Trades Association of New York has been postponed one week, to September 28. The tournament will be held on the links of the Pelham Country Club.

Washington Gasoline Suit to Be Tried on Its Merits

OLYMPIA, Wash., Sept. 11.—Ruling informally from the bench Superior Judge D. F. Wright held the State's conspiracy charges against 17 oil companies justified a trial of the case on its merits. Judge Wright denied the State's application for an injunction restraining the defendants from charging more than 16 cents (tax included) a gallon for gasoline during the pendency of the action. The court's ruling also denied the defendant's motion to dismiss the State's complaint. The state tax is 5 cents a gallon. At present gasoline is sold for about 21 cents in most parts of the State. Judge Wright is to fix a trial date later. Attorneys for the companies indicated they will ask for 60 days in which to prepare their case for trial.

APPOINTED TO COMMITTEES

NEW YORK, Sept. 11.—John H. Kosmoski, general credit manager of the Pan American Petroleum & Transport Co., New York, has been appointed to membership on the American Petroleum Institute Committee on Credit Practices by W. T. Holliday, chairman of the Division of Marketing. Mr. Holliday also appointed H. J. Brown, American Oil Co., Charleston, W. Va., to membership on the West Virginia Code Committee to succeed A. J. Young, resigned.

FORM R. & J. OIL CO.

BRADFORD, Pa., Sept. 11.—The R. & J. Oil Co. has been formed by W. R. Reck and Robert Johnston, Jr., for the purpose of blending and distributing Pennsylvania bright stocks and lubricants. Mr. Reck, formerly with the Bradford Oil Refining Co., is president.

SERVICE STATION OPENED

CHATHAM, Ontario, Sept. 11.—North Star Oil Co., of Winnipeg, has opened a new service station at Lethbridge, Alberta, in charge of Bert Maxwell.

Ask That Railroad Rates Shall Not Be Below Cost

A resolution calling upon President Roosevelt and others to exercise their authority in preventing railroads from reducing rates below cost of service in an attempt to destroy motor truck competition has been adopted by the Federated Truck Association of America. The resolution follows:

"Whereas, the railroads at the expense of long distance shippers and of local shippers of other commodities, have been establishing so-called cut rates to meet motor truck competition, which rates are less than the cost to such railroads of the service rendered, and do not return anywhere near the cost of transportation to the carriers, and are made for the sole purpose of destroying competition whereupon other rates will be established; now, therefore,

"Be it resolved, that in view of the purpose of the National Recovery Act, to secure employment and increase wages, that the President of the United States, the railroad co-ordinator, and the head of the National Recovery Administration be requested to use their authority to prevent such unfair practices, and to remedy such unfair conditions as now exist because of such practices."

TAX COLLECTIONS IMPROVE

Washington's strengthened gas tax law has saved the State $50,000 monthly in leaks through refund claims. Between April 15 and July 14 such claims declined 34.4 per cent. The city of Denver pays about half the motor fuel and vehicle taxes collected by Colorado. Missouri's gasoline tax is fixed at 2 cents per gallon until November 6, 1938, Montana's at 5 cents until March 31, 1941. July gas tax collections in California showed an increase for the first time in 12 months as compared with last year's collections.

PLAN MARKETERS MEETING

The organization meeting of the National Oil Marketers Association will be held at the Palmer House, Chicago, October 5, starting at 10 a.m. The meeting will be for the purpose of adopting bylaws, election of officers and laying plans for the future activities of the association. Oil jobbers and executives of state and local associations have been invited to attend. A session will be devoted to the marketing provisions of the petroleum code, which will have been in effect a month at that time. Paul E. Hadlick has been active in developing plans for the association.

"KEEP FILLED" SERVICE

An interesting experiment in the field of heating oil distribution is one being conducted by Shell Petroleum Corp. under the direction of Dr. R. T. Goodwin, head of the company's fuel oil sales department. The experiment, which is not wholly new but which is being studied continuously as a guide to future policies of the company, is the "keep filled" route delivery system, originated by the company. The current issue of the "Shell Globe" says Shell, one of the leading manufacturers of fuel oil, is expanding the field of direct distribution through company-owned distributing facilities and through jobbers selling the company brand. The "keep filled" system relieves the householder of the responsibility of watching his oil supply tank and prevents the exhausting of the oil supply. The tank truck salesman gauges the customer's fuel oil supply tank at regular intervals and delivers oil sufficient to maintain a safe level.

NEWS FOR PETROLEUM REFINERS

Name A.P.I. Refining Nominating Committee

W. W. Lowe, Henry L. Doherty & Co., New York, has been appointed chairman of the 1933 nominating committee for the Division of Refining of the American Petroleum Institute. Announcement of the appointment of Mr. Lowe and the 14 men who will serve with him was made by D. J. Moran, chairman of the general committee and vice president of the Institute. The committee will nominate the 20 elective members of the general refining committee at the annual meeting of the Institute in Chicago October 24-26, and the other five committeemen will be named by the president of the Institute following the annual meeting. Other nominations may be made when concurrence is given by as many as 15 enrolled members of the division.

The other members of the nominating committee designated by Chairman Moran are:

L. F. Bayer, vice president, Associated Oil Co., San Francisco; P. G. Blazer, president, Ashland Refining Co., Ashland; T. G. Delbridge, supervisor, process division, Atlantic Refining Co., Philadelphia; D. W. Grant, assistant to president, Pennzoil Co., Oil City; H. H. Greene, vice president, Kendall Refining Co., Bradford; R. A. Halloran, manager, research and development department, Standard Oil Co. of California, San Francisco; N. E. Loomis, manager, technical service division, Standard Oil Co. of New Jersey, New York; L. G. Metcalf, manager of refineries, Union Oil Co. of California, Los Angeles; E. B. McConnell, assistant to general manager of refineries, Standard Oil Co. of Ohio, Cleveland; C. E. Olmsted, vice president and general manager, California Petroleum Corp., Los Angeles; M. G. Paulus, vice president, Standard Oil Co. (Indiana), Chicago; A. E. Pew, Jr., vice president, Sun Oil Co., Philadelphia; J. B. Rather, in charge general and research laboratories, Socony-Vacuum Corp., New York; and Herschel G. Smith, manager, refinery technical division, Gulf Refining Co., Philadelphia.

CREDIT GROUP TO MEET

Members of the Committee in Credit Practices of the American Petroleum Institute, with M. L. Gosney as chairman, have been called to meet in the offices of the Institute, Friday morning, September 15, to make an interpretative study of the Schedule of Maximum Credit Terms set forth in Appendix B in the code of fair competition for the petroleum industry, as approved by President Franklin D. Roosevelt on August 19. The credit practices group of the American Petroleum Institute, organized a few months ago, has been studying credit practices in the industry, and on June 30 adopted a schedule of maximum credit terms. At the session called for September 15 the committee will determine whether to appoint a committee to appear before the planning and co-ordinating committee in Washington and make proposals for substituting the already adopted set of terms for the rules set up in Appendix B of the new code that is now being studied by the code committee in Washington.

KILGORE REFINERY BURNED

Fire starting from a boiler explosion damaged the Kilgore refinery, one of the largest in the East Texas oil field September 6. The loss was estimated at $50,000. The Kilgore Refining Co. is an enterprise of the Wrather interests, which also operates the Overton Refining Co.

GLOBE ADDS TO POWER PLANT

The Globe Oil & Refining Co. is making several miscellaneous additions to its plant in McPherson, Kans. A water well capable of producing 1,000 gallons of water per minute is nearing completion. A 25,000-bbl. tank is being built by the Graver Tank Manufacturing Co. for gasoline service and a 55,000-bbl. tank for the storage of crude is also under construction. The latter is being erected by the Pittsburgh-Des Moines Steel Co.

The power plant will also receive a substantial increase in capacity as the result of the purchase of a 500-horsepower 250-pound working pressure boiler from the Henry Vogt Machine Co. Work has also been started on this project. Recently a 200-horsepower Cooper-Bessemer gas-driven compressor was added to the gasoline recovery plant.

Pan American Purchases Gulf Coast Tank Farm

HOUSTON, Tex., Sept. 11.—Pan American Refining Corp., which is erecting a 25,000-bbl. refinery at Texas City, Tex., on the Gulf Coast, has purchased a fully equipped crude oil storage terminal situated on a nearby site from the Magnolia Petroleum Co.

The crude oil terminal consists of eleven 80,000-bbl., twelve 64,000-bbl. and two 55,000-bbl. tanks, with a total capacity of 1,758,000 bbls., together with facilities for unloading tank cars and also a pump station and discharge lines leading to a nearby tanker dock. These facilities can be used to load tankers for coastwise and export business. This site was formerly owned and used by the Vacuum Oil Co. prior to its merger with the Standard Oil Co. of New York.

The Pan American Refining Co. is also erecting additional tankage on its refinery site at Texas City. This tankage will include the following, twenty-five 80,000-bbl. tanks of which eight will have pontoon floating roofs and three others will be equipped with Wiggins breather roofs, and five 48,000-bbl. tanks of which three will be equipped with pontoon roofs.

SO THEY WERE EVADING TAX ON CIGARETS, TOO!

AUSTIN, Tex., Sept. 11.—Texas officials, aided by a stronger law, set out to make gasoline tax collections more complete and succeeded not only in increasing the State's revenue from this source, but also from cigarets!

The State put into the field a "gasoline tax enforcement army" of 70 trained men working out of eight district offices. Within a few weeks they obtained felony indictments against 36 alleged violators of the gasoline tax law and three convictions. Three refineries went in receivership pending settlement of tax payments.

Gasoline tax collections increased $300,000 a month. It now is estimated that as much as $4,000,000 previously escaped collection.

Collection of cigaret taxes, apparently evaded as much as were taxes upon gasoline, was conducted as a "sideline" operation, but Comptroller Sheppard recently said cigaret tax collections have increased at such a rapid rate he expects to add from $500,000 to $1,000,000 to the income from that source this year.

Regulations Drafted for Transportation by Water

WASHINGTON, D. C., Sept. 11.—Proposed rules and regulations to cover transportation by water of inflammable liquid petroleum products by common carriers will be presented for the American Petroleum Institute in a hearing before the Interstate Commerce Commission at Washington on the morning of September 28. Director William P. Bartel of the Interstate Commerce Commission will conduct the hearing. Recommendations for the petroleum industry are being drafted by a committee working under the direction of Willis Crane, counsel for the National Petroleum Association, as chairman of the special subcommittee.

The question of regulations for the transportation by water of explosives and other dangerous articles was opened last January on the Interstate Commerce Commission's own motion, and at that time the hearing was postponed at the request of the American Petroleum Institute to afford time for investigation and study.

Phillips Announces Rise in Payroll and Employes

CHICAGO, Sept. 11.—Phillips Petroleum Co. has employed 3,000 additional men to compensate for reductions in hours of men previously employed. Increased employment will mean a rise of about $3,000,000 in annual payrolls, according to Frank Phillips, president of the company. Mr. Phillips added that wages paid by the company are substantially above the minimum under the oil code provisions. He also expressed the opinion that the code will aid materially in stabilizing the oil industry.

CANADIAN OIL IMPORTS

CHATHAM, Ontario, Sept. 9.—Imports of crude petroleum into Canada in July, 1933, totaled 118,271,494 gallons compared with 121,120,617 gallons in June and 104,209,139 gallons in July, 1932. The imports came chiefly from the United States, 77,678,436; Colombia, 16,026,329; Peru, 14,399,335; Dutch West Indies, 6,129,521; Venezuela, 3,714,406. In addition some 5,616,838 gallons of crude petroleum not in its natural state were imported from Trinidad.

Casinghead gasoline imported in July totaled 1,619,847 gallons valued at $80,749, compared with 3,876,771 gallons valued at $151,684 in June and 1,444,396 gallons valued at $67,467 in July, 1932.

SHAMROCK TO BEGIN RUNNING

LEFORS, Tex., Sept. 11.—The Shamrock Oil & Gas Co. has completed construction of a skimming plant at the eastern edge of Lefors, and operations were expected to be started this week. The company purchased from the Bell Oil & Gas Co. gathering lines aggregating some 20 miles in the eastern part of this county, giving the new refinery access to the Morse Pool. The plant is expected to provide a market for 1,200 bbls. of Gray County crude daily.

BALLINGER PLANT COMPLETED

FORT WORTH, Tex., Sept. 11.—A 50-bbl. refinery has been completed just east of Ballinger, in Runnels County, and it will operate on crude from the McMillan Pool. The plant will be operated by Ray L. Hill. The Sinclair Prairie Pipe Line Co. has put a small line into the plant of the Octane Refining Co., in Callahan County, and will provide it with 600 bbls. of Callahan County crude daily.

ACCIDENT REVIEW SCHEDULED

Committee reports and reviews of statistics and activities in the field of accident prevention in all phases of the petroleum industries are scheduled for consideration at a joint session of the committees on accident prevention in production, marketing and refining of the American Petroleum Institute at the Stevens Hotel in Chicago on Sunday, October 1. The call for the meeting in advance of the annual sessions of the Institute has been made, H. N. Blakeslee, director of the department of accident prevention, advised the membership, so that they may participate as well in the meetings of the petroleum section of the National Safety Council.

East Texas Refiners File Suit to Test NRA Demands

HOUSTON, Tex., Sept. 11.—Attorney F. W. Fischer of Tyler, representing a group of small East Texas refineries, has presented to Federal Judge T. M. Kennerly in Houston a new suit along the lines of the one he filed in Washington recently attacking Harold Ickes, Secretary of the Interior, the National Recovery Act and the right of the Federal Govement to require refineries to make monthly reports, concerning receipts of oil, shipments and other matters.

The new suit is styled Panama Refining Co. et al vs. A. D. Ryan et al. Mr. Ryan is the chief investigator for the Department of the Interior in the East Texas oil field. Other defendants named are Howard Marshall, special prosecutor for the Interior Department, and S. D. Bennett of Beaumont, U. S. district attorney.

The suit asks for a restraining order, and upon hearing, an interlocutory injunction against Federal officials restraining them from requiring monthly reports exacted by Mr. Ryan's department.

Presidio Oil Tax Fight Taken to Highest Court

WASHINGTON, D. C., Sept. 9.—Standard Oil Co. of California has appealed to the U. S. Supreme Court to prevent California from imposing an excise tax on gasoline made and sold entirely within the Presidio of San Francisco.

Pointing out that the Presidio is a military reservation, exclusively under the jurisdiction of the War Department, the company contended in the California courts that the laws of the State cannot be enforced on it. The California Supreme Court, however, took a contrary view, and sustained the State in the suit it had brought to enforce payment of the tax.

TO USE PULVERIZED COKE

One of the largest steam boiler installations designed to utilize pulverized petroleum coke will be built by the Henry Vogt Co. in the plant of the Dallas Cotton Mills in Dallas, Tex. The boiler will deliver 36,000 pounds of steam per hour. The coke will be supplied by the local refinery of Texas Co.

ASK MODIFICATION OF CODE

The general assembly of Virginia, sitting in special session, has requested President Roosevelt to modify the oil code so as to permit oil companies to pay a part of the gasoline tax in order to preserve competition among retailers along state borders.

NATURAL GASOLINE MANUFACTURE

Canada Largest Importer of Natural Gasoline From U. S.

Canada was the largest importer of natural gasoline from the United States in July, according to the latest report of the Bureau of Foreign and Domestic Commerce. A total of 83,453 bbls. were shipped from this country into Canada for the month. The United Kingdom was the second largest consumer and received 56,736 bbls. in the same period. These two countries account for practically all of the 140,215 bbls. exported from this country on which has been placed a value of $251,685.

Most of the shipments were cleared through the Galveston, Tex., customs office. Shipments totaling 97,934 bbls. were handled through this office and the next largest clearing office was Sabine which handled 19,304 bbls.

The following table indicates the respective countries receiving the material and the customs offices through which it was cleared:

EXPORTS OF NATURAL GASOLINE COMPLETED BY BUREAU OF FOREIGN AND DOMESTIC COMMERCE

	Bbls.
United Kingdom	56,736
Canada	83,453
Nicaragua	26
Total	140,215
Value	$251,685

CUSTOM OFFICES HANDLING SHIPMENTS

	Bbls.
St. Lawrence	9,640
Buffalo	5,393
Mobile	26
Sabine	19,304
Galveston	97,934
Montana	964
Dakota	4,038
Duluth	2,355
Michigan	2,911
Total	140,215
Value	$251,685

PURE ADDING COMPRESSORS

The Pure Oil Co. is installing two more 175 horsepower twin type Bessemer engines in its casinghead gasoline plant in the Van Field, Van Zandt County. This plant will then have 21 units with a capacity of around 17,000,000 feet of gas per day. The additional units were necessary to serve four pneumatic pumping heads, with others to be added in the near future and a total of 12 to be in use in the field within the next six months according to plans already laid. The United Gas Co. is taking the residue gas from the gasoline plant, another reason for installing the two extra units which will handle more gas from wells in the field. The United connection was completed just recently, tying into the company's main gas line at Grand Saline.

The gasoline is shipped out by tank car from loading rack near the plant. John Prater is plant superintendent and in charge of the additional installation.

BUILD GAS LIFT PLANT

The T. B. Slick Trust Estate will build a gas lift plant in the Oklahoma City Field for the operation of some of its producing wells there. The new plant will be under construction within the next week as orders have been placed for the early delivery of three Clark 230 B.H.P. twin compressors.

GEO. SHANER IN NEW POSITION

George A. Shaner, effective September 1, will be connected with the Standard Inspection Laboratory of the Standard Oil Co. of New Jersey, 26 Broadway, New York City. Mr. Shaner is widely known in the Mid-Continent, where he was connected with the natural gasoline department of the Carter Oil Co. for 10½ years with headquarters in Tulsa.

Expanding Market for Liquefied Gases Through Use of Disinfecting Torch

In its efforts to expand the market for liquefied petroleum gases, the Standard Oil Co. of California has developed a burner and auxiliary equipment which the poultryman may use to distinct advantage in ridding the premises of destructive bacteria. The company is interested only in the consumption of the liquid fuel but has organized a service which is offered poultrymen and a description of this is summarized in the Standard Oil Bulletin, the company's house organ. The statement follows in part:

"To aid the poultry grower in his never-ending battle for sanitation, numerous chemical disinfectants are on the market, and have been used with varying degrees of success, usually applied with spray guns. When used with litters, such as straw, rice shells, or peat moss, they tend to make poultry houses wet and sloppy. Often they fail to reach the germ life, and some of them would not destroy certain bacteria if they did. Use of chemical disinfectants around drinking fountains and feed troughs, a favorite haunt of bacteria, taints the food and water, and may cause the fowls to forgo their sustenance.

"Of the vast and diverse army of parasites whose attacks cause poultry diseases and decimate the flocks, the well-known henhouse louse, tiny as it is, is a giant as compared with some of the most deadly ones, which are visible only with the aid of a microscope. Notable among the microscopic forms is the one which, entering the fowl with its food, causes coccidiosis. This disease, commonly called 'coxy' by the poultry growers, is one of the most dreaded of all fowl ailments with which the industry has to contend. It is not unusual for practically an entire flock to be wiped out by it in a single night.

"The important thing to know about coccidiosis is that the germ causing it is highly resistant to chemical disinfectants, but is readily destroyed by heat. Exhaustive laboratory tests conducted at various agricultural colleges have conclusively proved that a temperature of 170° F. will destroy the coccidiosis germ in three seconds.

"Heat, directly delivered by flame, is unquestionably the ideal agent for germ destruction and the maintenance of sanitary conditions on the poultry farm, if we accept the conclusion of men of science and the poultry growers, whose personal experience is the basis for their opinions. Many poultry raisers have for some time used kerosene and gasoline torches for disinfecting chicken houses, and in all instances where consistent use of such equipment has been made large reductions in the mortality of chicks have been achieved. That this means of processing was not more widely adopted is obviously due to the unsuitable character of the torches employed and the hazards attending use of the fuels they are designed to burn. The disadvantages call for no detailed description now, for meanwhile Calol Firekil Gas and equipment have come upon the scene.

"The sales activities have been preceded by two years of experimental work initiated by the company. Close checks have been made on the utility value of this system of germ eradication, and we have not yet encountered a single case where the customer is not eager to go on record as having found the gas and equipment splendidly suited to his needs. If doubtful at first, they have become enthusiastic over results attained. In their expressions of approval of the Firekil way, they almost invariably have stressed its advantage in the matter of economy as well as of efficacy, as compared with means they previously had employed.

"Calol Firekil Gas is a liquefied petroleum gas delivered in cylinders. To facilitate its movement around the poultry plant, a truck has been designed for it. This container (with its wheeled carrier, a gas regulator, a 20-foot length of hose, and a specially designed torch) and the necessary connections, constitute a Firekil set. The customer purchases the gas, but not the equipment, which is leased to him on very easy terms.

"With this outfit there is no preheating necessary, nor any handling of liquid fuel with the danger of spilling and attendant fire hazards. The contents of the cylinders have been liquefied by compression, but come out of them only as gas and without any generating preliminaries. You are ready to start your sanitation work upon delivery of the equipment.

"The Firekil torch has a maximum flame temperature of 2,000° F., which no germ can withstand. In using it the poultryman should first make a thorough clean-up of the premises to be torched, preceded, of course, by the transference of the feathered occupants to other pens. Care should be taken not to torch against cel-o-glass, curtains, sacks, or other highly inflammable material. Our investigation and experience have shown that there is no danger of fire if the operator exercises reasonable care. We do recommend, however, as a precautionary measure, that the operator have a wet sack and a bucket of water at hand during the torching operations.

"That the chances of starting fires when torching are authoritatively held to be negligible is attested by the fact that many insurance companies approve the following clause and make it a condition of their policies: 'Permission is hereby granted without prejudice to this insurance to maintain and operate flame-type exterminators using gas as fuel.' This has been done without any raising of insurance rates.

"The question of how often should a chicken house be torched admits of no definite final answer, for conditions vary with seasonal changes and the habits of the different breeds of fowls. The company's extensive check-up on practices and results, however, impels it to suggest that the operation should occur after every cleaning and removal of litter. That is the practice of successful poultrymen. The frequency of this activity varies with individual poultrymen. With full-grown healthy birds, some growers clean once a month, while others permit longer periods of time to intervene. This much is certain: In cases where disease has broken out in the flock, torching should be carried on daily. During the brooding season, once every 10 days is generally held to be sufficient, and under no circumstances should a new brood of chicks be placed in the brooder house until it has first been cleaned and torched.

"Firekil serves as a germ exterminator in rabbit hutches, dairies and cattle pens, hog pens, sooa, around swimming pools and lockers—in the latter cases to combat the microbe that causes 'athlete's foot.'"

A Firekil unit functioning. The width of the regular torch flame is 9 inches. For operators desiring more spread, there is the No. 50 torch, whose flame is 17 inches wide at 7 pounds

No Oil Price Fixing by the Government Now

(Continued from Page 9)

terpretations of various sections, such requests being commonly accompanied by the statement: 'We want to observe the code 100 per cent.' As rapidly as possible the Planning and Co-ordinating Committee, through its subcommittees, will make these interpretations.

"Every oil state government has accepted the production allocations and is now co-operating with the Federal Government to make the code effective. This united effort will make more difficult any attempt by a few to either evade or defeat the purposes of the code.

"The committee approved the supplementary code for the State of Michigan, which had been referred to it by Oil Administrator Ickes, subject to the change of the name of the committee set up in that code from 'Planning and Co-ordinating Committee' to some other name.

"Interpretations of the code by the committee on adjustments and interpretation will be issued in public statements whenever these have a general as well as a special effect. It is expected that these interpretations will be issued in pamphlet form whenever their number justifies this."

Regional Chairmen

The regional chairmen who will constitute the direct contact of code authorities with the industry are expected to be announced in a day or two. These are believed to be J. D. Collett, of Fort Worth, for Texas and in other southwestern states; E. G. Seubert, president of the Standard Oil Co. (Indiana), for the Middle West region; L. P. St. Clair, president of the Union Oil Co. of California, for the Pacific Coast; W. R. Ferguson, vice president of the Continental Oil Co., for the Rocky Mountains, and H. R. Gallagher, president of the Consolidated Oil Corp., for East Coast.

Each of these men will head a complete regional committee composed of producers, refiners and marketers.

That independents in the oil industry will be adequately represented on regional subcommittees of the Planning and Co-ordinating Committee was promised by that committee yesterday. This includes state and local committees which will administer the code and was in response to a fear expressed by independents that they would not have proper representation.

Price-Fixing Discussion

The Planning and Co-ordinating Committee devoted most of its time during the past week and up to the time of the White House conference to a discussion of price-fixing recommendations to be presented to the administrator.

Differentials for varying grades of crude oil and for different locations of production, as well as for varying grades of gasoline were considered.

Mr. Ickes pronounced himself satisfied with the price rises so far declared, but declined to commit himself on further gains or the necessity of price fixing.

"These," he said, "are bridges I shall cross when I come to them."

Pointing out that if it were found that the allocations alone were not enough to rehabilitate the industry, Mr. Ickes promised adjustment would be made.

"If any further remedy is needed we will consider price fixing as one," he declared. "Section 6 of the code is there to use if and when we want to."

"If we can get production and consumption fairly well balanced, it will give us an idea what other regulatory measures are necessary. We are not going to do anything until these allocations go into effect unless something intervenes. We will know more about the issue when this works out."

Ratio provisions of the code, the Secretary explained, are necessary only if prices are fixed.

"Ample protection" to the consumer and independent producer was promised by the Secretary "if the price-control provisions are used."

"We are going to watch carefully the retail price of gasoline," he said. "I hope it will not get out of fair and proper relation with crude oil prices."

The "door to price fixing or changes will not be closed," he said.

Ickes Expects Co-operation

Secretary Ickes made this statement Friday:

"Oil production allocations went into effect today with every major producer officially pledged to full support and in full agreement, so far as I am advised, to continue complete co-operation with the oil administration.

"While the code contains some provisions on which there has been a divergence of views within the industry, the public pledges of the companies indicate that these differences will not be reflected in failure of any company to conform with the provisions of the code."

Technical Board

Creation of a technical board to aid the oil administration and the industry's Planning and Co-ordinating Committee is under way. The technical board would be composed of six or seven members and the oil legal aides to the oil administrator, and would include economists and geologists as well as practical oil men.

J. Elmer Thomas of Fort Worth was reported as likely to be chairman, with at least two of the members to be petroleum experts from the Bureau of Mines, which would compile estimates of production needs.

Ickes Warns Texas

The Department of the Interior issued the following statement September 7, 1933:

"In response to a telegram from the Railroad Commission of Texas, asking postponement of the effective date of the code of fair competition for the petroleum industry from September 8 to September 16, Harold L. Ickes, Secretary of the Interior and administrator of the petroleum code, yesterday sent this telegraphic reply:

"'Your telegram received. It has been definitely understood during and since oil code hearings you had called hearing after statutory notice and hearings had been continued from time to time awaiting code approval and certification of allocations so that Texas Railroad Commission might take immediate action. In view of this and also because of the nation-wide emergency and necessity for uniform effective of allocations September 8 will you follow your precedents and issue temporary order in accordance with certification under code pending formal hearing. Prefer this action than for Federal agency to proceed further under Article 3, Sections 3 and 4, of code. Appreciate your co-operation and early reply.'

"The original telegram of the Texas Railroad Commission follows:

"'Your telegram certifying the figure of 975,200 bbls. daily as the net reasonable market demand for the State of Texas would be effective September 8, 1933, has been received. We have this day ordered a state-wide proration hearing for the purpose of receiving evidence upon which to base orders limiting the total production in the State of Texas and for the further purpose of allocating said production among the various fields of State of Texas. Our law requires 10 days' notice to be given in advance of such hearings and orders passed in absence of said legal 10 days' notice would be invalid. This hearing has been called for 9 a.m. Saturday, September 16, being the earliest possible date for such hearing to be legally held. It is our earnest desire to co-operate as completely with the administration as is legally possible for us to do. Any suggestions that you care to make will be highly appreciated by us. We would be glad to have someone familiar with the facts to testify as to market demand at our hearing. (Signed) Lon A. Smith, chairman; C. V. Terrell, commissioner; Ernest O. Thompson, commissioner, Railroad Commission of Texas.'

"Following the interchange of telegrams, the following telegram was received from the Texas Railroad Commission:

"'Harold L. Ickes, Secretary of the Interior: In order to co-operate fully with the recovery plan of our great President, Franklin D. Roosevelt, we are today issuing a temporary emergency order effective simultaneously with your order 7 a.m. September 8, 1933, setting the allowable production of petroleum for Texas as 975,200 bbls. per day. However, the laws of Texas require 10 days' notice of hearing and this regular hearing will be held here in Austin at 9 a.m., September 16, 1933, and we shall expect some testimony or evidence in support the allowance set for Texas so that the commission may legally pass upon same and have the basis for a valid order. (Signed) Railroad Commission of Texas; Lon A. Smith, chairman; C. V. Terrell, commissioner; Ernest O. Thompson, commissioner.'

"On receipt of the telegram, Secretary Ickes said:

"'I am very gratified with the spirit of co-operation shown by the Texas Railroad Commission. I realize fully the difficulties its members face, but at the same time it is imperative that the oil code go into effect simultaneously everywhere throughout the country. This occurs at 7 o'clock tomorrow morning.'"

The Texas Order

The Texas Railroad Commission, September 7, issued the following order to all operators in West Texas:

Effective 7 a.m. September 8, the Railroad Commission of Texas has ordered a 25 per cent cut in the production for all producing fields in the State to conform with the Federal allocation.

The only exceptions to this order will be for marginal wells, which will be allowed to produce to capacity.

The allowances for marginal wells are as follows: Pumping wells less than 2,000 feet, 10 bbls.; from 2,000 to 4,000 feet, 20 bbls.; from 4,000 to 6,000 feet, 25 bbls.; from 6,000 to 8,000 feet, 30 bbls.; below 8,000 feet, 35 bbls.

The 25 per cent cut is to be applied to the present total production. However, in no case is a pumping well to be restricted below the marginal allowance as set forth above.

For fields in this area covered by proration schedules (Crane-Upton, Ector, Howard-Glasscock, Winkler and Yates) 25 per cent will be deducted from each individual schedule allowance, except for marginal wells, as above defined.

For all wells not now carried on proration schedules, the daily average production for the month of August shall serve as a basis for reduction, and 25 per cent shall be deducted from each well except in the case of marginal wells.

Companies are required to keep daily production records for all oil properties, and to furnish monthly summaries of these records to this office.

Your very truly,
W. R. BOWDEN,
Deputy Supervisor.

Alexander Fraser Appointed President of the Shell Petroleum Corporation

ST. LOUIS, Mo., Sept. 11.—Appointment of Alexander Fraser as president of Shell Petroleum Corp. and its affiliated companies is announced. Mr. Fraser has been vice president of the company for several years.

Born in Glasgow, Scotland, 44 years ago, Mr. Fraser's first appearance in the business world was with the Pumpherston Oil Co., one of the foremost of several engaged in the shale industry in Scotland. While still a young man, Mr. Fraser accepted a position with the General Asphalt interests in the Trinidad oil fields. After a few years he was transferred to its head office and appointed director of its Trinidad oil companies. When in this position he had supervision of the early development of the company's Venezuelan business and gained an intimate knowledge of oil exploitation and development work in Latin America.

In 1917 Mr. Fraser was engaged for a time in important work with the British War Mission in this country but returned to England in that year to become more completely identified with Allied interests. His arrival in England synchronized with the organization of the British Petroleum Executive, and by reason of his experience in the oil business, he was immediately drafted to an important position in that organization, and later to the secretaryship of the Inter-Allied Petroleum Council. The council was set up to solve the many perplexing problems which had arisen regarding the economic distribution of petroleum products among the Allies, provision of adequate storage and transport facilities, as well as the most efficient employment of ocean tonnage.

At the close of hostilities, Mr. Fraser had also much to do with the closing up of several of the government activities which had been promoted during war time for the purpose of stimulating the production of oil in Great Britain. As soon as his government duties had been concluded, Mr. Fraser returned to the United States to become associated with the Shell interests. Before coming to St. Louis he was vice president of the Asiatic Petroleum Corp. in New York, as well as of the Colon and Caribbean companies which have extensive oil properties in Venezuela.

Mr. Fraser succeeds R. G. A. van der Woude who has been transferred to New York in an executive capacity with Shell Union Oil Corp.

Jersey Company Pledged to Aid Code, Says Farish

NEW YORK, Sept. 11.—W. S. Farish, chairman of the Standard Oil Co. of New Jersey, commenting on reports from Washington that the company had refused to co-operate with the Planning and Co-ordinating Committee said:

"The Standard Oil Co. of New Jersey is definitely pledged to aid and co-operate with the Federal agency to make the operation of the petroleum code a success. We are definitely on record with the NRA and the Federal agency as opposed to price fixing.

"We sincerely believe that if production of crude is kept down to consumer demand there is no need for price fixing. I state again that the Standard Oil of New Jersey believes in the NRA program and is doing everything possible to make it a success and that Standard Oil of New Jersey believes the oil code without price fixing will put the petroleum industry on a satisfactory profit basis.

"We stand ready to furnish any information or facts at our command to aid the petroleum committee or the Federal agency in the administration of the code."

R. A. CHESEBROUGH DIES

NEW YORK, Sept. 11.—Robert Augustus Chesebrough, the inventor of vaseline and a former president of the Chesebrough Manufacturing Co., its maker, died September 8 at his home in Spring Lake, N. J. He was 96 years old.

In 1870 he invented the petroleum jelly now known as vaseline. He then organized the Chesebrough Manufacturing Co., which was incorporated in 1880. The following year control of the company was purchased by the Standard Oil Co. Mr. Chesebrough continued in the presidency until 1909, at the age of 72 years.

Hints of Practical Value

By L. G. E. BIGNELL
Petroleum Engineering Editor

Sketch in Tubing

It is sometimes necessary to calculate the stretch in a string of tubing suspended in an oil, water or gas well to determine as closely as possible the exact position it will occupy with regard to the bottom of the well. The following method can be used and if the mathematical calculations are carefully made the total stretch in the string of pipe will be found:

Measure the overall length of each joint of tubing including the coupling.

Count the number of joints made up.

The makeup loss per joint is the total tubing thread length plus the distance the last thread scratch is buried from the coupling face.

(The makeup loss is 1.800 inches or 0.15 feet for 4-inch oil well tubing and 2.6875 inches or 0.224 foot for 4-inch A.P.I. oil well tubing.)

The amount of theoretical stretch for any length of string freely suspended in air may be calculated using the following formula:

$$e = \frac{12\,W\,L^2}{2\,A\,E} = .000000703\,L^2$$

Where:

e = Stretch in inches.
W = Weight of pipe in pounds per foot.
L = Length of string in feet.
A = Area of pipe wall in square inches.
E = 29,000,000 (Young's modulus for steel).

Tubing strings are not usually stretched beyond their yield point at any place so the average calculated elongation should be satisfactory.

Example

Assume a 4-inch tubing string with 2,200 feet total overall length of the 110 joints.

Then:

110 — 1 = 109 joints to be made up
109 × 0.15 = 16.35 ft. make up loss
2,200 — 16.35 = 2,183.65 ft.

Stretch equals:

.000000703 × 2,183.65² = 3.3 in.
and
2,183.65 + (3.3 ÷ 12) = 2,183.925 ft. or
2,183 ft. 11 in.

The elongation of pipe in tension due to its own weight varies as the square of its length.

$$e = \frac{72VL^2}{E}$$

Where:

e = Elongation in inches.
V = Wt. per cu. ft. = .2833.
L = Length in feet.
E = Modulus of elasticity = 30,000,000.

If a pipe of given length is suspended, the stress in the metal is proportional to its length:

$$S = 12VL = 3.4L$$

The amount of additional load that can be applied to the lower end of the pipe is then the difference between the safe load and the weight of the pipe. Expressed in terms of unit stress:

$$S_1 = S_s - S$$

Where:

S_1 = Additional stress.
S_s = Safe stress.
S = Stress due to its own weight.

The elongation of pipe due to a load applied at the bottom end expressed in the same terms is:

$$e = 12\frac{S_1}{E}$$

Substituting S_1 for S in this relation, the amount of additional elongation e_1 required to bring the stress up to S_2 is:

$$e_1 = \frac{12L}{E}(S - 3.4L)$$

None of these relations discussed above takes into consideration the weight of the fluid in the hole. The weight of casing in water is .2455 pound per cubic inch or 86.8 per cent of the value in air. In mud weighing 90 pounds per cubic foot, its weight would be .230 pound per cubic inch or 8.1 per cent of its weight in air.

It is customary to use a float plug thus relieving a large part of the tension in setting casing. With mud weighing 10 pounds per gallon and 4½-inch, 16-pound per foot casing, the load is reduced to 56 per cent of the deadweight. Under the same conditions, 13⅜-inch, 61-pound per foot casing can be floated. It should be kept in mind, however, that the fluid column must not be allowed to become so great as to endanger the casing in collapse.

As an example, suppose an oil string 8,000 feet long is landed on bottom and then the hole washed free from mud and brought in through tubing. The fluid level in the hole may later in the life of the well stand close to the bottom, leaving the oil string suspended in gas. Assume the temperature and pressure conditions such that the density of the gas is the same as air, then the elongation of the pipe will be 43.3 inches while, in mud, its elongation was only 35.4 inches, or a difference of 8.1 inches. Therefore, holding the casing above bottom a foot or two would eliminate any possibility of column loading.

COLON PRODUCTION

Production of Colon Oil Corp.'s subsidiary in Venezuela for the four weeks ended September 1, was 556,700 bbls.

MEXICAN EXPLORATION

Word from Mexico City states that Mexican Gulf Coast Corp. has started drilling a well in the Cacalilao zone, Panuco, Vera Cruz State, according to the petroleum department of the ministery of national economy. The department reports that it has under consideration numerous applications for concessions to explore in various oil-producing regions.

Crude Oil Prices

(Continued from Page 25)

TIDE WATER PIPE CO.
(Effective September 6, 1933)

Bradford, Pa.	$2.35
Allegany, N. Y.	2.35

PENNZOIL CO.
(Effective September 6, 1933)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	$2.27
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2.26
Includes Tituaville district.	
Group C	2.25
Includes Turkey and Tidioute districts.	
Group D	2.24
Includes Bear Creek and Porkey districts.	
Group E	2.23
Includes Edeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emienton, Tiona, Lacy and Kinsua districts.	
Price depends on length of pipe line haul to plant at Oil City.	

PURE OIL CO.
(Effective September 6, 1933)

Cabin Creek, W. Va.	$2.07
Bradford Hollow, W. Va.	2.07
Kelly Creek, W. Va.	1.97

Rocky Mountain States

Iles, light (Sept. 9, 1933)	$.85
Iles, heavy (Sept. 9, 1933)	.75
Florence, Colo. (June 17, 1933)	.30
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Cat Creek, Mont. (June 17, 1933)	.52
Big Muddy (Sept. 9, 1933)	.90
Frannie, light (Sept. 9, 1933)	.76
Frannie, heavy (Sept. 9, 1933)	.57
Salt Creek and La Barge (Sept. 9, 1933)	
See Stanolind Mid-Continent price schedule	
Grass Creek, light (Sept. 9, 1933)	1.07
Grass Creek, heavy (Dec. 15, 1932)	.45
Elk Basin (Sept. 9, 1933)	1.07
Rock Creek (Sept. 9, 1933)	.91
Dutton Creek (July 8, 1933)	
See Mid-Continent gravity prices.	
Lance Creek (Dec. 16, 1932)	**.93**
Poison Spider (Mar. 5, 1931)	**.70**
Hudson (June 2, 1931)	**.85**
Lander (Mar. 5, 1931)	**.40**
Rex Lake (Feb. 22, 1930)	**1.10**
Osage (Jan. 18, 1933)	**.53**
Lost Soldier (Sept. 8, 1933)	.62
Hamilton Dome (Dec. 16, 1932)	.25
Torchlight (Sept. 9, 1933)	1.07
Greybull (Sept. 9, 1933)	1.07
Pondera (June 17, 1933)	.75
Sunburst (Sept. 9, 1933)	1.25
Hogback (Sept. 9, 1933)	1.00
Lea County, N. Mex.	.60
Maljamar (Sept. 9, 1933)	.60
Artesia-Jackson (Sept. 9, 1933)	.60

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Iles by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 8, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro.
*Continental Oil Co.

Middle Western States

OHIO OIL CO.
(Effective September 9, 1933)

Lima	$1.20
Illinois	1.12
Princeton, Ind.	1.12
Plymouth	Shut in
Western Kentucky	1.07
Midland, Mich. (Sept. 9, 1933)*	.99
Somerset, Ky. (Sept. 11, 1933)	1.12
Hart County, Ky. (Sept. 11, 1933)	1.07
Muskegon, Mich. (Mar. 27)	**See note**

***Posted by Pure Oil Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted price. Muskegon: All companies pay $1 per barrel effective March 27. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Hart County, Kentucky, crude purchased by Stoll Refining Co.**

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs*	2.17
Turner Valley (Aug. 26, 1933)†:	
Clear naphtha	$3.16
Discolored naphtha	2.92
Crude oil, 50 gravity	2.71
Crude oil, 45 to 49.9	2.16
Crude oil 40 to 44.9	1.63

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$.466

*F.o.b. ship, based on August transactions and exclusive of production and export taxes and bar dues.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier La Habra	Montebello	Santa Fe Springs	La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	...	$.65	$.65	$.65	$.65	...	$.65	$ 57	$.57	$.57	$.65
15-15.9	.65	.65	.69	.69	.66	.69	...	.66	.65	.65	.65	...	.65	...	...	...	.65
16-16.9	.66	.65	.72	.73	.69	.73	...	.69	.67	.68	.65	...	.65	...	...	...	.65
17-17.9	.69	.65	.75	.76	.73	.76	...	.72	.70	.71	.65	...	.68	...	...	...	.68
18-18.9	.72	.65	.78	.80	.76	.79	...	.75	.74	.74	.65	...	.71	.61	.61	.59	.71
19-19.9	.75	.65	.81	.83	.80	.82	...	.78	.78	.78	.65	...	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	...	.81	.82	.81	.66	...	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	...	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	...	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.83	.89	.93	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	...	1.00	1.01	.90	.95	1.00	...	.85	.87	.93	.85	.85	.81	.93
26-26.9	.97	.93	1.01	...	1.04	1.04	.94	.98	1.04	...	.89	.90	.96	.89	.88	...	.96
27-27.9	1.00	.98	1.04	...	...	1.07	.97	...	1.08	...	...	.94	.99	.93	.91	...	.99
28-28.9	1.03	1.02	1.07	...	...	1.10	1.01	...	1.11	...	...	.98	1.02	.97	.94	...	1.02
29-29.9	1.06	1.05	1.09	...	...	...	1.04	...	1.15	...	...	1.01	1.05	1.01	.97	...	1.05
30-30.9	1.09	1.10	1.12	...	...	...	1.08	...	...	...	...	1.05	1.09	1.05	1.00	...	1.09
31-31.9	...	...	...	...	...	...	1.12	...	...	...	...	1.08	1.12	1.09	...	...	1.12
32-32.9	...	...	...	...	...	...	1.15	...	...	...	...	1.12	1.15	1.13	...	...	1.15
33-33.9	...	...	...	...	...	...	...	...	...	...	...	1.16	1.18	1.17	...	...	1.18
34-34.9	...	...	...	...	...	...	...	...	...	...	...	1.19	1.21	...	...	...	1.21
35-35.9	...	...	...	...	...	...	...	...	...	...	...	1.23	...	...	...	...	...
36-36.9	...	...	...	...	...	...	...	...	...	...	...	1.26	...	...	...	...	...
37-37.9	...	...	...	...	...	...	...	...	...	...	...	1.30	...	...	...	...	...
38-38.9	...	...	...	...	...	...	...	...	...	...	...	1.34	...	...	...	...	...

Additional Standard Oil Quotations

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15.
Newhall—14 degrees and over, 57 cents.
McKittrick and Kern River—14 degrees and over, 57 cents.
Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19-19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.
Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over $1.11.

The Texas Co. posted in Shiel Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 2 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 30 degrees and over at $1.
Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.
General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon and Olinda up to 25-25.9, and Torrance up to 25-25.9.
Union Oil Co., effective September 6, posts same prices as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Late Fields

MICHIGAN

MUSKEGON, Mich., Sept. 12.—H. C. Nelson's No. 1-A Doolittle, fourth producer in the Oceana County Field, increased today from 125 bbls. daily to 75 bbls. hourly with acid treatment, making it the largest in the new western Michigan area and the biggest in this section of the State since flush production at Muskegon in 1929.

No. 1-A Doolittle is located in the NE SE Section 36-15n-17, Hart Township, two locations north of James Flanagan's No. 1 E. Mitchell, former record Oceana producer. Flanagan's No. 3 Mitchell is nearing completion with two more started on the same lease.

Davis Oil Co.'s No. 1 Nitzke, NE NW Section 17-13n-1w, Porter Township, Midland County, was completed for 500 bbls. initial in Dundee pay sands.

W. Hunter Atha and Columbia Oil & Gas Co.'s No. 1 Van Conent, SW SW SE Section 16n-4w, Vernon Township, is making 3,750,000 feet of gas daily in the Michigan series at 1,300 feet. Two Denver Township, Isabella County, tests were completed as dusters, Stoddard & Dark's No. 1 Elmer E. Brown, SE SW NE Section 16-15n-3w, and Melvin & Brehm's No. 1 Smith, Section 23.

OKLAHOMA

E. H. Moore and others' test in the C SW SE SW Section 29-2-7, in southern Pontotoc County, a wildcat miles away from any other oil production, was treated with acid in the past week and later flowed 450 bbls. of oil in 24 hours. It is producing from Hunton lime, total depth 3,451 feet.

Vaughn and others' No. 1, C NW NE SW Section 33-7-4, in the South St. Louis area in Pottawatomie County, flowed 800 bbls. and 690 bbls. respectively in a two-day test. It is producing from dolomite at 4,170-4,219 feet, with the big production from 4,215-19 feet.

Sledge and others' test in C SW SE SW Section 22-2-7, Pontotoc County, produced 40,000,000 feet of gas in 24 hours from sand at 1,174-77 feet.

The test of Wentz & Feagin, C SE SW Section 10-21-2, is a failure in the Wilcox sand and may be abandoned. It was a hole full of water at 4,422-24 feet. This was one of the most closely watched wells in the State, and is a great disappointment.

ADVANCE LUB PRICES

CHICAGO, Sept. 12.—Effective September 15 the Standard Oil Co. (Indiana) will advance lubricants for industrial use. Cylinder oils costing 40 cents and over will be up 3 cents a gallon, those under 40 cents are advanced 2 cents.

Engine oils and others now costing 40 cents and up will be advanced 3 cents a gallon. Those under 40 cents are advanced 2 cents.

Paraffin oils advance 1 cent, and black oils half cent. Lub greases are advanced from three-tenths to seven-tenths cent per pound. Present quantity discounts on contracts remain in effect.

MAGNETIC STORM

Tucson, Ariz., observatory of the U. S. Coast and Geodetic Survey reports a severe magnetic storm started on September 8 and ended September 10. The telegram follows:

"Storm began eight. Twenty-one. Severe."

"Storm ended tenth. Thirteen."

PROTECTS RUBBER, LEATHER

Of interest to the oil industry is a new process for protecting rubber and leather belts, rubber casing protectors, in fact anything made of rubber or leather. It is a liquid preparation, applied with a brush, preventing checks and giving it protection against destructive sun rays, according to the manufacturers, L. P. MacGregor Co., 317 Linden Avenue, Long Beach, Calif. It already has been introduced in the oil fields, primarily for coating casing protectors. Literature describing the product more fully may be obtained from the manufacturers.

Pipe Line and Drilling Departments Are Planned by Oklahoma Commission

Reorganization of the proration department of the Oklahoma Corporation Commission was announced Monday with appointment of three key men as deputy umpires, two of them to head new departments.

C. C. Brown of Ponca City, once connected with the Marland Oil Co., is to organize a pipe line department for the State; Clyde M. Becker, geologist, of Chickasha, is to head a field department to supervise reconditioning and drilling of wells; and Ralph O. Thompson of Oklahoma City becomes assistant to Edwin Dabney, attorney.

Coincident with these announcements was another by W. J. Armstrong, umpire, of opening a Tulsa district office, temporarily in charge of L. R. Milligan. Mr.

CHARLES C. BROWN

Milligan will have the status of deputy umpire, as a clerk and two deputies in the Greater Seminole districts will report direct to him on routine work. This facilitates handling of reports and detail for companies having offices in Tulsa.

It was understood that Mr. Brown did not accept the position as a permanent appointment, but agreed to aid the commission and umpire in establishing the new department, which may prove to be the key to the proration machine of the future.

Mr. Brown assumed his duties Monday, and Mr. Armstrong said he would be in harness before mid-week. The new deputy is 48 years old, and has been in the oil business since 1903. From July, 1916, to the same month in 1919 he was with the Department of the Interior as oil and gas inspector out of Pawhuska; in 1917 he was appointed by Gov. Robert L. Williams to appraise state school lands under lease. From 1919 to 1929 he was with the Marland Oil Co. in charge of pipe lines and production, winding up as general superintendent, from September, 1928, until late in 1929. Since that time he was associated with the E. W. Marland, Inc., for a while, but for the last couple of years has been in business for himself.

Mr. Becker is to assume his duties on September 15, he now being in New Mexico with a mining company. Mr. Becker is regarded as an authority on southwestern Oklahoma and the Anadarko Basin country; he has drilled a number of wildcats there and has been connected with most of the important tests in that area. He is a member of the A.I.M.M.E., the A.A.P.G., and the Oklahoma Academy of Science. He has a large number of papers on geology to his credit, many of them being published by the Oklahoma Geological Survey.

Mr. Thompson is a graduate of the University of Oklahoma, and was mentioned as proration attorney when the new law was passed. During the past few years he has been before the commission on proration matters, and has been employed in general oil cases.

Mr. Milligan was clerk under Ray M. Collins, state umpire, and has had considerable experience in handling proration matters in the Seminole district.

"We're going to organize the proration division into departments," Mr. Armstrong said, "and our first problem will be the pipe line department as it concerns the Oklahoma City Field.

"It will be the duty of that department to see where the oil goes, follow it through and return reports from pipe lines, refineries and railroad loading racks, furnishing daily reports on all oil produced. The meter department also will be under it.

"After this step has been worked out for the Oklahoma City Field, it will branch out to give production reports at least once a week so we can have the daily production of the State and stay within the allocation set for Oklahoma by the Federal Government."

Commission Reduces Rates on Pipe Lines in Texas

AUSTIN, Tex., Sept. 11.—Reductions in rates charged by pipe line companies to transport oil have been ordered by the Texas Railroad Commission. The new schedules will not become effective until December 1, however.

The present charge of 30 cents for transporting oil from the East Texas Field was reduced to 22½ cents. The charge for carrying oil from West Texas (Permian Basin) was cut to 37½ cents. The scale for South Texas fields was reduced by from 1 to 9 cents on a basis of equalization to Beaumont and Houston.

Laten Stanberry, director of the gas utilities division of the commission, estimated the reductions would mean a saving of approximately $30,000,000 annually to shippers of oil.

The commission directed a reduction of 33⅓ per cent in the tonnage allowance. The existing 2 per cent strapping deductions was reduced to 1 per cent. The 1 per cent allowance for pipe line losses was left as it is.

Drive Toward Higher Prices Meeting Success

(Continued from Page 23)

neutral prices is given in the greatly improved position of the Pennsylvania lubricating oil market and the lessening of the strained conditions in the Gulf Coast market. 150-160 viscosity zero to 10 cold test bright stock was tightly held on Tuesday at 22¼ cents.

Wax shipments are keeping refinery stocks at a low figure and are being made in the carrying out of contracts made weeks ago. Every effort will be made over the immediate future to bring wax prices up and in line with a normal price level and the future of the wax market promises to reflect these constructive efforts.

INDIANA STANDARD PRICES UP

CHICAGO, Sept. 13.—The Standard Oil Co. (Indiana) today advanced its tank wagon price of kerosene 1 cent, furnace oils one-half cent and naphthas 2 cents. This makes the new prices: V. M.&P. naphtha, 15.9 cents; cleaners' naphtha, 15 cents; oleum spirits, 11.9 cents; Stanisol, 15 cents. Distillates in quantities under 100 gallons: No. 1, 8¼ cents; No. 2, 7¾ cents; No. 3, 7¼ cents; No. 4, under 300 gallons, 6¼ cents; No. 5, 6 cents. The company also advanced the tank car price on oleum spirits to 7½ cents and on V.M.&P. naphtha to 8½ cents.

Mapes Elected Acting Secretary-Treasurer

Clarel B. Mapes has been elected acting secretary and treasurer of the Mid-Continent Oil and Gas Association to succeed the late Harry H. Smith, who died on June 17. Mr. Mapes has for

CLAREL B. MAPES

several years been assistant secretary and technologist of the association. The action was taken at a special meeting of directors. The next annual meeting of the association will be held in the spring of 1934, at which time the directors and officers will be elected.

Mr. Mapes has given the association very valuable service in the six years he has been employed by it, and his work has received wide recognition in the oil and gas industry.

Charles W. Pratt Dies; Pioneer in Oil Industry

OIL CITY, Pa., Sept. 11.—Col. Charles W. Pratt, 91, pioneer oil producer of western Pennsylvania and former secretary of the National Supply Co., died September 1 in Devon, near Philadelphia.

Mr. Pratt was first associated with the oil industry in the Pithole section, the first oil field, and later developed oil fields in Forest County. He had been a resident of Pittsburgh for 40 years. During the eighties he was associated with S. G. Bayne, a leading oil field supply dealer, and later was made a member of the firm of Bayne, Wilson & Pratt, out of which grew the National Supply Co. which Messrs. Wilson & Pratt helped organize. He retired 10 years ago.

He is survived by two daughters, Mrs. C. S. James, at whose home he died, and Miss Pauline Pratt.

Cleaning and Deepening Wells in Yates Pool, Tex.

(Continued from Page 10)

Gas Co. cleanout crew in its Yates Pool wells and has created considerable interest among operators there and it is anticipated that its use will be expanded to other fields where light portable rotary cleanout equipment can be used to advantage.

While wells in Yates Pool are from 1,200 to 1,700 feet deep it is believed this same outfit can be used on deeper wells as it is possible to support the weight of the drill pipe by means of a swivel mounted in a tubing elevator which can be carried by a casing hook swung in the mast. The drill pipe can be fed into the hole by a line wound on a winch mounted upon the tractor that furnishes power for the turntable.

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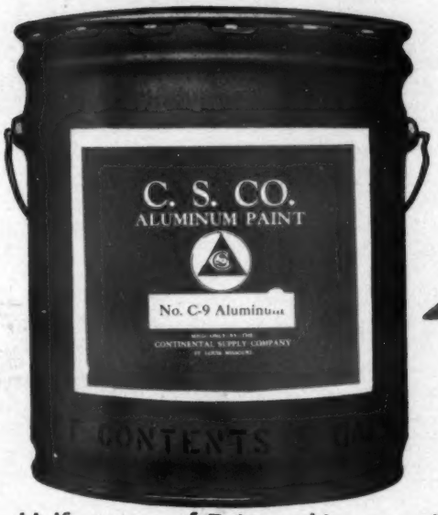

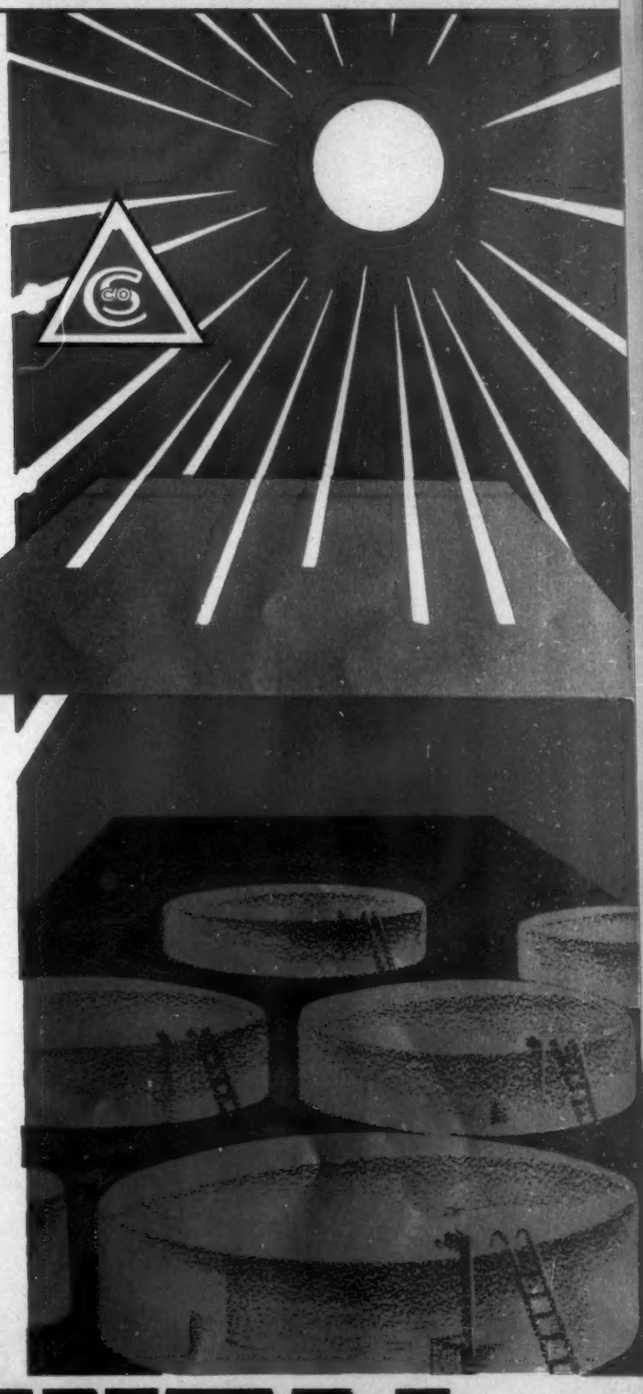

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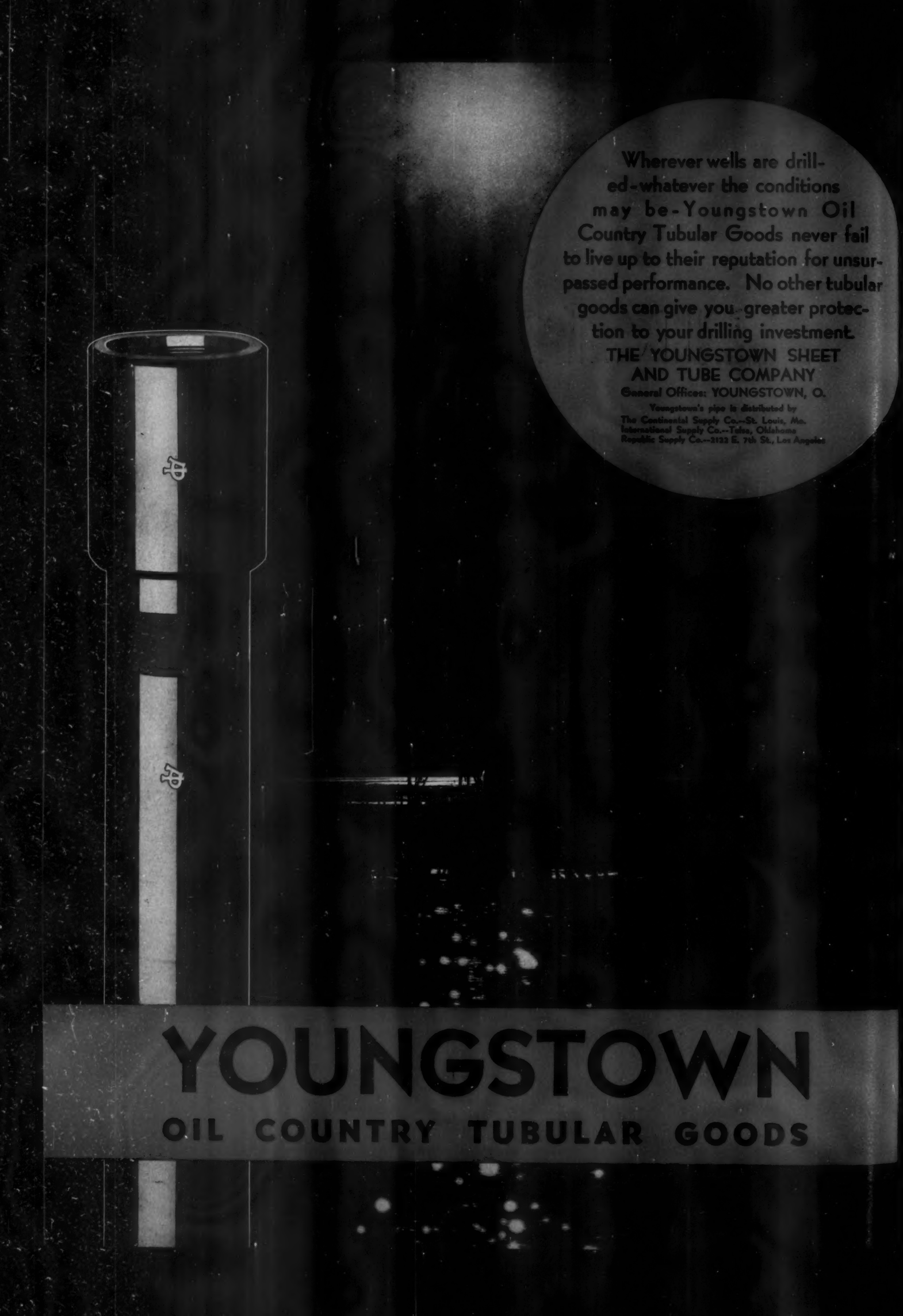
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Refinery Group Hears Symposium on Cracking

(Continued from Page 16)

oil (3,000,000,000 bbls. in the past six years); saving of $100,000,000 a year in lower drilling activity required; saving of $400,000,000 in otherwise necessary additional crude oil pipe line capacity; restriction of kerosene, gas oil and fuel oil stocks. Present investment in cracking equipment totals more than $400,000,000 and researches in connection with cracking involve an annual expenditure of more than $5,000,000. In the automotive industry: In 1920 there were 9,232,000 automobiles registered and the gasoline consumption was 108,945,000 bbls. In 1932 there were 24,150,000 automobiles registered and the consumption of gasoline totaled 373,770,000 bbls. The heavy gasoline demand has been met by cracking and it is pointed out that while in 1920 the cracked gasoline percentage of total gasoline was only 12.9 per cent, in 1932 this percentage had risen to 42.8 per cent. Cracked gasoline, with its higher octane rating, has made higher compression ratios possible and thus contributed greatly to present high automobile engine performance.

In the manufactured gas industry: Two hundred fifty billion cubic feet of high heating value gases produced by cracking processes must be taken into account. These gases are being used in cold enrichment of low B.t.u. manufactured gas. When the "cracked gases" are reformed there are valuable by-products such as hydrogen, and from the original gas may be extracted liquefiable gases, propane and butane, for bottling and distribution. The bottled gas markets have expanded from 223,000 gallons in 1922 to 33,630,000 gallons in 1932. "Casinghead" gasoline has suffered somewhat from the inroads of gasoline produced in vapor recovery units operated in connection with cracking processes. The coal industry is affected through the use of cracked fuel oils, cracked gases and cracked petroleum coke. The road oil and asphalt industries are facing competition from cracked road-building hydrocarbons, and lastly, the alcohol industry is witnessing the production of ethyl alcohol and ethylene glycol commercially, and the solvent industry is finding competition in isopropyl, secondary butyl and amyl alcohols.

Variables in Mixed-Phase Cracking

Describing "mixed-phase" cracking as that applying to experiments with temperatures ranging from 850° F. to 900° F., and pressures from 200 pounds to 1,500 pounds, Harold Sydnor, Standard Oil Co. of New Jersey, discusses differences in results secured from various cracking processes as due to differences in the relationships of the fundamental variables of temperature, pressure and time of reaction, together with a fourth factor, i.e., the extent to which the reactions are allowed to proceed before the tarry bodies and gasoline fractions are separated from the recycle gas oil. The author refers to this factor as the "conversion per pass," and states it as the product of the gasoline yield times the per cent fresh feed in total feed. While the cracking coil cycle has been touched upon in one of the above papers, Sydnor goes to some detail and the effect of the amount of recycling upon product yields is discussed at length, with data presented to show that both temperature and pressure as well as the extent of the conversion per pass influence the yields and characteristics of the products secured. In his presentation Sydnor says that the tendency in recent years has been to increase the ratio of the cracking taking place in the soaking drum to that occurring in the coil proper. In handling fuel crudes, he says, it is frequently the practice to "break" the viscosity in one furnace and recycle the resulting cycle gas oil through another furnace and soaking drum. Some of the systems separate the fuel oil under higher pressures and subsequently flash this fuel oil to recover the cycle gas oil. Of the various means used to assure clean feed stocks to the heating zones, Sydnor cites the DeFlorez clean recirculation system. There has been an increasing appreciation of the fact, according to Sydnor, that coke formation in cracking coil tubes is very largely the result of the inclusion of small quantities of asphaltic material in the charge stock to the heating zone.

In his conclusion Sydnor says it has been found that the results obtained by cracking a fairly wide range of straightrun and cycle gas oils under constant operating conditions can be related to the aniline point and gravity of the gas oils. A very good relationship has also been found to exist between the gravity, aniline point and boiling range for both straightrun and cycle gas oils. From these interrelationships, it is possible to predict with reasonable accuracy the behavior of a fairly wide range of distilled fractions when cracked over the range of temperature and pressure that has been studied to date.

Physical Factors in Cracking Operation

Pressure in the separation operation, say G. G. Brown, Jr., University of Michigan, W. K. Lewis and H. C. Weber, Massachusetts Institute of Technology, in their paper, "Physical Factors Governing Cracking Operation," has increased to a point where the computation methods satisfactory under former conditions are no longer adequate. Quantitative analysis of the influence of operating conditions on separation efficiency is necessary and is possible only if there is adequate knowledge of vapor-liquid equilibria and of heat effects. It is the purpose of the authors to "review the information available on the pressure-volume-temperature relations of hydrocarbons, indicate methods based on these relations for calculating important thermal properties of hydrocarbon and hydrocarbon mixtures and point out computation methods for evaluating the conditions existing at equilibrium in vapor-liquid mixtures, special emphasis being laid on the extrapolation of these methods and their application to the solution of cracking plant problems."

Halogens and Halogen Compounds

Discussing at some length the considerable and varied utility of aluminum chloride, A. W. Nash and J. Mason, University of Birmingham, England, in their contribution, "The Use of Halogens and Halogen Compounds in the Heat Treatment of Hydrocarbons," give an interesting review of the important roles of the halogens and their compounds in a number of effects in connection with petroleum refining. The processes in which halogens are used in conjunction with other substances, or in which halogen compounds are used, far outnumber those in which halogens alone are used. In the chlorination of methane, for instance, chlorides of Cu, Fe, Ca, Mg, are used; in benzene or toluene chlorination, $FeCl_3$; and in the addition of chlorine to acetylene, $SbCl_5$. In a recent patent claim one of the examples shows that when propane is passed at a temperature of 550° C. over Te on pumice, in the presence of iodine, the outflowing gases are found to contain approximately 16 per cent of unsaturated compounds, principally ethylene. Studies of Egloff and Moore, involving the passing of hydrogen chloride or chlorine gas over several metals and nonmetals immersed in a Pennsylvania kerosene, are cited, and show the superiority of aluminum as a catalyst. Anhydrous aluminum chloride, the authors say, is the most important halogen compound in use in processes of heat treatment of hydrocarbons. However, a maximum of 10 per cent $AlCl_3$ should be used in cracking and high temperatures should be avoided as this compound sublimes at 181-195° C. Loss of the chloride can be avoided by the use of higher pressures. It is pointed out that the use of aluminum chloride for its properties of effecting cracking, removing unsaturated compounds, and effecting desulphurization is a feature of many patents. Other halides mentioned in connection with cracking or refining are boron halides, zinc chloride, stannic chloride, a dry metal hypochlorite and titanium chloride. Finally, aluminum chloride may be used in polymerizing olefins, reactions involving condensation of olefins with hydrocarbons or hydrocarbon mixtures, and condensations of chlorinated derivatives with hydrocarbons. Synthetic lubricating oils have been produced by polymerization of olefins.

Pyrolysis Research

Abstracts by the authors are presented here on two contributions to the cracking symposium. These are "Pyrolysis of Saturated Hydrocarbons," by F. E. Frey, Phillips Petroleum Co., and "Pyrolysis of Unsaturated Hydrocarbons," by C. D. Hurd, Northwestern University. Treating of the saturated hydrocarbons, Frey says: "The literature is reviewed with special attention to the primary decomposition reactions. Paraffin hydrocarbons decompose chiefly into simpler complementary olefins and paraffins. High decomposition temperatures favor the concomitant formation of complementary olefins and hydrogen, and in some cases more than two hydrocarbon product molecules are formed. A reaction mechanism postulating the transient existence of free alkyl radicals is in accord with these observations. The primary decomposition of cycloparaffins has not been investigated extensively.

"By surface catalysis the paraffins are dehydrogenated to the corresponding olefins or degraded to carbon, methane and hydrogen. The cyclohexanes are converted into the corresponding aromatics; the other cycloparaffins under various rearrangements."

Professor Hurd summarizes his paper on the unsaturated hydrocarbons thus: "A survey is made of the status of work in this field and new data are also included. The importance of the contact time is brought out. The gaseous products of the reaction, the products of rearrangement and dehydrogenation, and the higher boiling products of the reaction are discussed in turn.

"The various findings are correlated with analogies from other series of organic compounds and a mechanism has been proposed which correlates the data. One important item which is brought out for the first time is that branched chain products of rearrangement are formed from certain types of straight chain olefins. The influence of metal tubes in these pyrolyses is also briefly discussed."

Oxidizing Saturated Hydrocarbons

Liquid phase oxidation, by means of air mostly, of petroleum hydrocarbons under controlled conditions of temperature and pressure, with temperature held considerably under the thermal decomposition temperature of the hydrocarbons, is discussed by A. W. Burwell, Alox Chemical Corp., in his paper, "Decomposition of Saturated Petroleum Hydrocarbons Under Oxidizing Conditions at Low Temperatures." Burwell, working with 200-pound quantities of hydrocarbon or hydrocarbon mixtures came upon results missed by investigators who worked in quantities of 50 grams or so. His account of the formation of formic acid is interesting: "The main reaction is the entrance of the oxygen first into the Beta carbon atom in the chain in paraffin wax, assuming that paraffin wax is a straight chain material. In the course of time, and probably with the introduction of other oxygen atoms into the chain at other points this particular carbon atom becomes involved in a loss of hydrogen and becomes a ketone group. Then with sufficient oxygen in solution in the whole mass, under the influence of the general reaction the chain splits at the ketone group with the formation of two acids. As is already known, the ketone group almost always goes with the larger molecules and we have thus formic acid and an acid of higher molecular weight which may be the rest of the hydrocarbon." Other products result in these oxidation investigations and the reactions given are deduced from the products formed. These included acetic acid, lactic acid, succinic acid, propionic acid, butyric and valeric acids, and so on up to and including C_6 in lessening quantities. In the matter of high percentage recovery from oxidation masses, the author says the best results are obtained by saponifying with caustic soda, returning the unsaponifiable portions, together with new quantities of hydrocarbons to the oxidizer, decomposing the soaps and distilling the recovered acids. However, this method is costly and it is more practical to recover the acids from the distilled mass of oxidized hydrocarbons.

Hydrogenation and Thermodynamics

Equations for simple hydrogenation (addition of hydrogen to the molecule without any derangement of its basic structure) and destructive hydrogenation (hydrogenation accompanied by pyrolysis and rupture of the molecule), are presented and the deduction is made that theoretically any degree of hydrogenation may be obtained at any temperature by appropriate choice of the hydrogen pressure, in the contribution of W. J. Sweeney and A. Voorhies, Standard Oil Co. of Louisiana. This paper contains considerable interesting information meriting general attention, and for this reason quotations are given at some length.

"Cracking" is compared with destructive hydrogenation. "In general," the authors say, "the stability to heat of the various hydrocarbons increases in the order of paraffins, olefins, diolefins, naphthenes and aromatics. From this it follows that the paraffinic chains break first, the point of scission being nearly always between carbon atoms with the resulting formation of one saturated and one unsaturated molecule. These new molecules may in turn break down into still smaller units. Likewise, naphthene rings may split to form olefins and, in general, it appears that the higher the temperature the greater is the tendency for hydrogen to split off. By such dehydrogenation naphthene rings tend to become converted into aromatics, while olefinic bonds are formed in paraffin chains.

"It therefore follows that unsaturated compounds always result from the initial decomposition reactions. These unsaturated molecules, particularly the larger ones, polymerize readily and in this manner there are produced new compounds whose molecules tend to be heavier than those of the original feed stock. Since the unsaturated molecules possess less hydrogen per carbon atom than the original hydrocarbons from which they are derived, it follows that such polymerization results in the formation of products of lower hydrogen-carbon ratio. On prolonged exposure to high temperature, the polymerized material suffers recracking with the formation of new unsaturated bonds which again give rise to further polymerization.

"Progressive reactions of this type lead to the formation of the typical products of petroleum cracking: (1) gaseous and low boiling liquid compounds of high hydrogen content; (2) liquid material of intermediate molecular weight and a hydrogen-carbon ratio differing more or less from that of the original feed stock, depending upon the mode of operation, and (3) liquid material of high molecular

LEGAL

Notice of sale of oil and gas lease, Department of the Interior, General Land Office, Washington. Notice is given that the following described lands are offered to the qualified bidder of the highest amount offered per acre as a bonus for the privilege of leasing the land under Sec. 17 of the leasing act of February 25, 1920 (41 Stat. 437), at the royalty rate fixed in the standard lease form, copy of which may be procured from the Commissioner of the General Land Office: T. 23 N., R. 16 W., I.M., Sec. 29, Lot 2 (SW¼ NE¼), 54.53 acres; Sec. 32, Lot 2 (NW¼ NE¼), 54.53 acres. The successful bidder, when so notified, will be required to deposit cash or certified check on a solvent bank for one-fourth of the bid and pay the remaining three-fourths upon receipt of lease for execution. The successful bidder also shall agree in writing to the stipulations contained in the "Regulations Governing the Sale of Lands under Sec. 17 of the Act of February 25 1920," approved September 22, 1922, copy of which may be procured from the oil and gas supervisor, Geological Survey, Federal Building, Tulsa, Oklahoma, or the Commissioner of the General Land Office, Washington, D. C. Sealed bids will be received in the office of the Secretary of the Interior up to 10:00 a.m., September 16, 1933. Bidders are warned against violation of the provisions of Sec. 59, U. S. Criminal Code, approved March 4, 1909, prohibiting any unlawful combination or intimidation of bidders. The right is reserved to reject any and all bids in the discretion of the Secretary of the Interior. (Signed) Fred W. Johnson, Commissioner.

weight, tar and petroleum coke, possessing a lower ratio of hydrogen to carbon.

"The gasoline yield in pyrolysis of petroleum oils is probably more nearly a direct function of the per cent hydrogen in the charging stock than of its gravity. It is well known that cracked gas oils of a given gravity produce more tar and less gasoline than virgin gas oils of corresponding gravity. This is in conformity with the lower hydrogen content of the cracked gas oil. The gasoline-yielding advantage of destructive hydrogenation as opposed to pyrolysis is increasingly great, the lower the hydrogen content of the original charging stock." The authors discuss a new catalyst which permits low temperature (650°-803° F.) operation at high reaction rate. "Thus," they say, "in gasoline production from gas oils by recycle operation, 60 per cent fresh feed and 122 per cent volumetric yield of gasoline has been obtained from a cracked charging stock (21.5° A.P.I., 50° F. aniline point) at a production rate of one and a half volumes of gasoline per volume of catalyst per hour." In conclusion they point out the important function of hydrogenation in the removal of sulphur, oxygen and nitrogen as hydrogen sulphide, water and ammonia.

Response to Various Forms of Energy

The author's abstract of the paper, "Comparison of the Response of Hydrocarbons to Various Forms of Energy," by S. C. Lind, University of Minnesota, is presented here:

"Particular attention is given to the chemical behavior of hydrocarbons in electrical discharge in gaseous, liquid and solid systems. Comparison is made with thermal reactions. The determination of insulating oils as a result of electronic action is considered. The action of cathode rays as illustrating such action is discussed. The rates of reaction of different gaseous hydrocarbons are compared. In paraffins the size of the molecule is the controlling factor. In olefins the unsaturation produces a high rate of reaction but a small liberation of hydrogen and methane. Reaction in electrodeless discharge, in alpha radiation and with electrons of controlled speed are considered."

The "Coal Hydrocarbon"

H. H. Lowry, Carnegie Institute of Technology, gives the following abstract of his contribution to the "cracking" symposium: "Thermal Decomposition of the 'Coal Hydrocarbon'":

"Evidence is presented to show that coals from the peat stage through the higher ranks contain as an essential part of their structure six-membered carbon rings similar to those present in aromatic compounds and graphite. It is pointed out that coal is not a hydrocarbon and contains little, if any, free hydrocarbon. Consideration of the nature of the products obtained from coal with increasing severity of thermal treatment, suggests that the aromatics found in coal tar result primarily from dehydrogenation and decarboxylation of depolymerized nuclei present in the original coal. Finally data are presented which support the idea that 'free' carbon in pitch, coke and charcoal may be regarded as highly polymerized aromatic hydrocarbons which gradually and regularly approach graphite as the temperature at which they are formed increases."

Gaseous Hydrocarbons

The following are abstracts of the two remaining contributions to the symposium, "Acetylene Formation in Thermal Decomposition of Hydrocarbons," by H. H. Storch, U. S. Bureau of Mines, and "Thermal Treatment of Gaseous Hydrocarbons," by A. E. Dunstan, E. N. Hague and R. V. Wheeler, Anglo-Persian Oil Co., Ltd.

In "The Thermal Treatment of Gaseous Hydrocarbons," the authors present "a review of thermal decomposition and polymerization mechanism of gaseous hydrocarbons. Roughly 60 per cent of gaseous paraffins pyrolise into benzene and higher aromatics distilling below 170° C. by atmospheric pressure treatment at 700° to 850° C. Sixty-five to 88 per cent of olefin gas polymerized at 380° to 440° C. under pressures up to 800 pounds per square inch yielding a similar liquid. The product is sunlight stable, containing no conjugated double bonds, and has about half the antiknock blending efficiency of benzene. Reaction chamber material influence carbon formation."

In "Acetylene Formation in Thermal Decomposition of Hydrocarbons" the author reviews "Data on the pyrolysis of methane, ethane, ethylene, gasoline and petroleum to yield acetylene. All of the data on the thermal decomposition of methane which do not involve more than about 60 per cent total conversion are shown to be approximately predictable by the use of two simple linear equations. The dehydrogenation of ethylene to acetylene appears to be a unimolecular reaction. Its kinetics are not yet sufficiently well known to write a rate equation. The data on gasoline and petroleum are of casual industrial interest, but present nothing new of any theoretical interest. Some discussion of possible industrial processes utilizing the thermal decomposition of methane or ethylene diluted with 75-90 per cent inert gas such as H_2 or CO_2 is presented."

Fractional Distillation Analysis

Walter J. Podbielniak, research chemical engineer, contributes three papers to the sessions of the Petroleum Division. Two of these deal with the subject of precise fractional distillation analysis, forming Parts 4 and 5 of a series he has presented before the division. Abstracts on these two papers and one on "Cracking Gas Using Nichrome Tubes and High Temperatures Combined With Long and Short Heating Periods," follow:

"Part 4. A method is described whereby natural gas and other gases containing large percentages of methane or air and normally requiring the use of liquid air as refrigerant in low temperature distillation analysis, can now be accurately analyzed for propane, isobutane, n-butane, pentanes and heavier, using liquid carbon dioxide or dry ice only as refrigerant. The gas sample is partially condensed in a dry ice-acetone bath with no cooling in the reflux, and the condensate fractionated in the usual manner using liquid carbon dioxide in the reflux. From the distillation and volume and temperature measurement it is possible to compute the uncondensed hydrocarbons in the residue gas from the condensation stage and thus to arrive at the percentages of the heavier hydrocarbons with an accuracy comparable to that obtained in the liquid air method. The cost of the refrigerant is scarcely 20 cents. The time required is no more than with the liquid air method and the operation if anything is simpler. However, methane and ethane are not determined separately, although they may be determined by slow combustion of the noncondensed gas. The partial pressures of the hydrocarbons in the condensate deviate very considerably from Raoult's Law and suitable corrections have been worked out for these deviations."

"Part 5. Whereas the preceding paper of this series described standardization of low temperature fractionation analysis by completely automatic control, the present one describes various comparatively simple mechanical accessories developed to simplify manual operation and to make more feasible an explicit standardization of operation for narrow classes of samples. The mechanical accessories include devices for controlling reflux temperature and distillation pressure; for continuously indicating the exact distillation rate; for continuously indicating the amount of vapor flowing up the column (and therefore the proportionate heat supply to bottom of column); for controlling heat supply and distillation rate from the pressure drop across the column; and for semiautomatic plotting of the fractional distillation curve for either low or high-temperature fractionations. It will be noted that by the use of these devices two of the most difficult controllable and most important variables, namely distillation rate and heat supply, may be exactly and explicitly specified and readily followed."

In his paper on cracking gas using nichrome tubes, Podbielniak describes and discusses experiments on cracking gas in various steel and alloy tubes including stainless steel and nichrome compositions. Steel tubes failed above about 900° F.; calorized tubes, above about 1,200° F.; 18-8 tubes, above about 1,500° F., tube wall temperature, while nichrome tubes showed very good life at tube wall temperatures as high as 1,850° F. and internal gas temperatures as high as 1,700° F. The combination of high temperatures ranging from 1,500° to 1,750° F. with heating periods as short as one-tenth of a second (at rapid conversion temperature) gave highest yields of aromatics and olefins and almost negligible yields of hydrogen and carbon. The catlytic effect of nickel in promoting formation of carbon and hydrogen, as observed by previous investigators, was not apparent in these experiments.

Optical Density Color Measurement

S. W. Ferris and J. M. McIlvain, Atlantic Refining Co., in their paper on this subject, discuss the requirements of a satisfactory color scale for petroleum fractions other than gasolines and naphthas, point out the shortcomings of color scales previously used, and present the experimental steps which led to the development of a color scale meeting all requirements. The new scale is based on the determination of the optical density of the sample in monochromatic green light, and data is provided with which to orient the new scale with those previously used over a wide range of materials.

Grease Data From Fundamentals

M. H. Arveson, Standard Oil Co. (Indiana), whose description of a new viscometer appeared in the 1932 Refinery Number of The Oil and Gas Journal, presents a sequel to that discussion in his contribution, "The Flow of Petroleum Lubricating Greases." A mechanistic conception of grease structure is given and its behavior during flow illustrated. The author states that it has been found possible to correlate all data obtained with the previously described viscometer at temperatures of 77°, 50°, 25° and 0° F. on a variety of greases containing calcium mixed fatty acid soap into one general curve in which the viscosity of the oil in the grease at the temperature in question, the soap factor K (determined primarily by the soap content), and the rate of shear are the primary factors determining the apparent viscosity of the grease.

The views on grease structure presented in the article on the constant shear viscometer cited above are enlarged and illustrations are given. The author says: "The conditions of flow in the differential element in a capillary tube may be visualized as similar to that of two continuous brushes with bristles pressed together, the space between being filled with a viscous medium. The bristles represent the projections of the maze of soap particles in the grease and the viscous medium, the oil. The soap particles are undoubtedly quite irregular in shape, and therefore, forces perpendicular to the plane will exist during flow. Brownian movement might also aid in the release of the 'bristles' before maximum deflection."

This model illustration, according to Arveson, "can represent only a first approximation of the conditions existing in the differential element in the flow of greases, but in spite of this, agrees qualitatively with the following points noted in the behavior of greases during flow: (1) Apparent viscosity decreases with increasing rate of shear; (2) apparent viscosity increases with increasing soap content; (3) apparent viscosity approaches a limiting value at high rate of shear, higher than, but of the same order of magnitude as that of the oil in the grease; (4) with decreasing rates of shear the stress tends to approach a constant value, but; (5) a departure of points from the general curve at very low value rates of shear exists and can be explained by a vibrational effect." The inability of Bingham's equation to apply to the general curve derived graphically for petroleum lubricating greases containing soap is illustrated.

Control of Lubricating Greases

C. L. Knopf, Sinclair Refining Co., summarizes his paper thus: "Viscosity, being the most important property of oils, generally constitutes the basis for their classification. The subject of viscosimetry is quite well understood and standard methods are now very well established. Greases on the other hand, because of relatively complicated structure, are more difficult of classification. This paper describes various instruments and methods for testing different types of greases. Lubricants suitable for a given service should possess certain characteristics which are determined by one or several tests, whereas lubricants for another type of service may require entirely different properties which are determined by other methods. The new instruments insure accurate control of greases."

The Sinclair Pressure Viscometer which measures the viscosity of semi-fluid or plastic lubricants is illustrated, as is the Sinclair Viscidometer (spike test), which was developed primarily for the purpose of determining the viscidity of plastics or semifluid lubricants by measuring the resistance offered by the passage of an object through the body of the lubricant, which is indicative of the drag resistance, says Knopf, as well as the nonchannel characteristics of the product when employed as a rear-axle lubricant at low temperatures. The Adherometer, a device designed to simulate the sliding of a transmission gear on its shaft, is also described.

Pressure Drop in Bubble Cap Columns

In their paper M. C. Rogers and E. W. Thiele, Standard Oil Co. (Indiana) present "A new method for computing the flow of vapor through bubble cap slots, and the extent to which the slots are occupied by vapor. The other elements of pressure drop are also considered. Experiments with bubble caps containing a single triangular or rectangular notch, bubbling air, hydrogen and carbon dioxide through water and naphtha, give fair confirmation of the theory. Some work on a model bubble plate is also given."

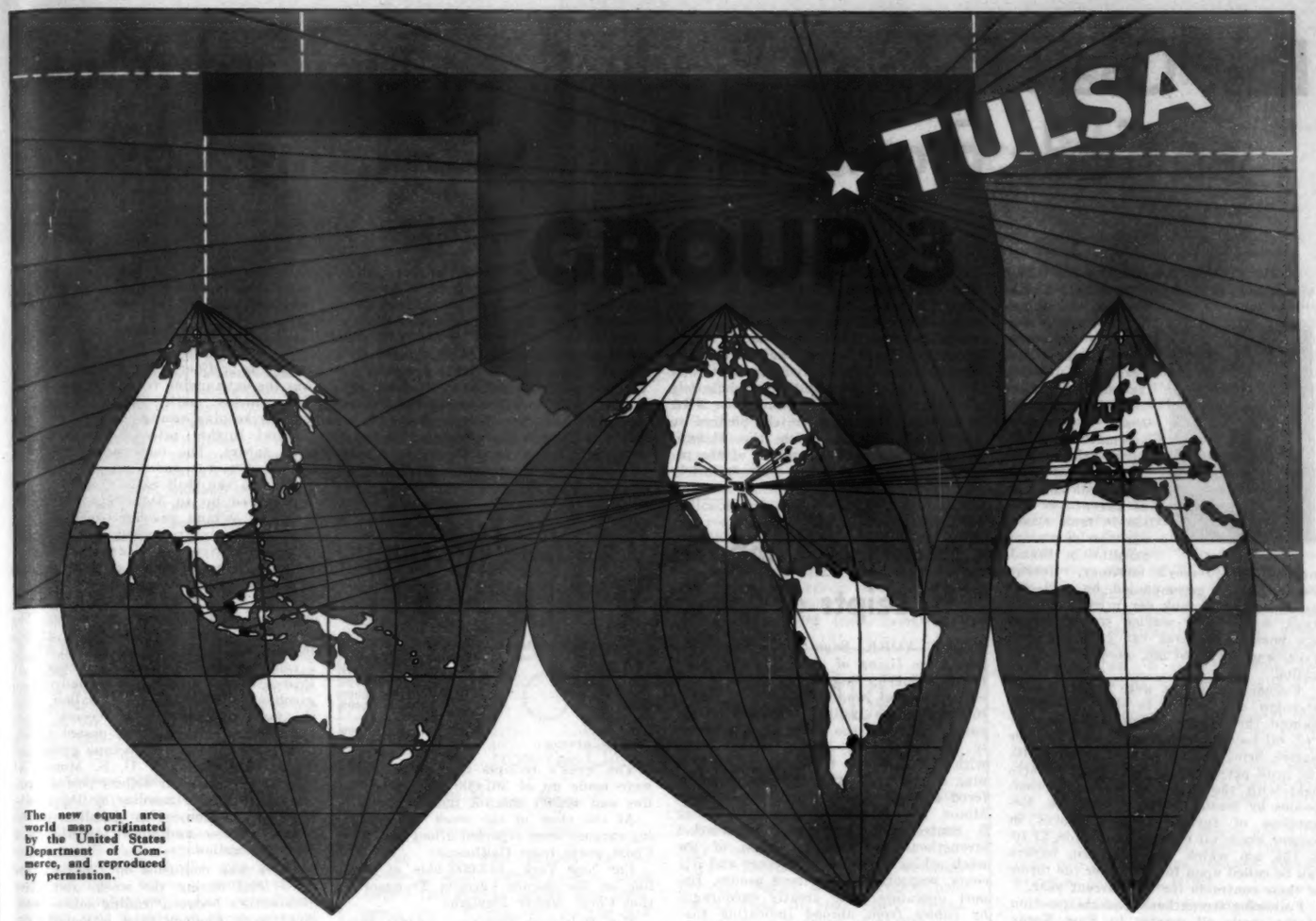
In conclusion they say, "This investigation has shown that for the rectangular bubble caps, the friction loss through the chimney uptake and space under the cap is negligible and need not be considered when estimating pressure drop. The pressure drop through the slot opening can be expressed by a formula developed from theoretical considerations, using an orifice constant of 0.51. The static head above the slot tends to be a maximum at vapor flows near zero, and in cases where the overflow weir is located near the bubble caps, the static head may actually decrease with increased vapor flow. It is believed that the formulas given for tooth openings are accurate enough for engineering purposes, and that similar formulas for slots of other shapes using 0.51 as a coefficient will be found satisfactory. Since only two of the three factors governing the pressure drop are susceptible to calculation, the treatment given here cannot yield anything but maximum values. The data, however, should suggest methods of designing bubble trays having a low pressure drop."

ITALY'S INCREASED PRODUCTION

ROME, Italy, Sept. 9.—Italian output of crude oil has increased very considerably of late years, rising from 58,500 bbls. in 1930 to 121,410 bbls. in 1931 and 198,300 bbls. in 1932. This increase is accounted for by the increased yield of the oil wells in Emilia (provinces of Parma and Piacenza) as a result of recent drilling, more especially at Fontevivo and near Salsomaggiore in the province of Parma.

J. L. PEACOCK DIES

Col. John Lee Peacock, 78, head of the Peacock Oil Co., died at his home in Okmulgee, Okla., after a brief illness. Mr. Peacock came to Oklahoma as a clerk of the territorial court before statehood. He later served as county registrar of deeds before entering upon the oil business. Burial was in Kentland, Ind.



The new equal area world map originated by the United States Department of Commerce, and reproduced by permission.

Oil Prices at Tulsa Determine Prices Throughout the World

Tulsa's position as "Oil Capital of the World" has received added strength through the fact that the code for the petroleum industry as signed by President Roosevelt bases all oil prices throughout the Nation on the Group 3 prices, which are established at Tulsa.

That the Nation's oil price structure is based on the Tulsa market means that the entire world's oil price structure is also based on this market, for the United States is the predominating factor in world oil, and oil prices in the United States have always served as the basis from which prices are computed in foreign countries.

Today, when a Russian oil producer sells oil in England, his price is computed on the Tulsa market.

Recognition of Tulsa as the World's Oil Capital came originally as a result of her position at the hub of world oil *production*. Tulsa is still the hub of world oil production. The Mid-Continent area, in which Tulsa is centrally located, produces 62.73% of United States crude production, and this domestic production is, in turn, approximately 60% of the entire world's production.

Located at the center of crude production, Tulsa became inevitably the hub, also, of the nation's pipe line fabric and refining industry. A map of the nation's pipe lines and refining centers shows Tulsa at the center of this vast network, representing billions of dollars of invested capital.

Again, the executive control of these vast interests emanates primarily from Tulsa, which contains the headquarters offices of more major oil and pipe line companies than are found in all other major oil centers of the Southwest combined.

The dominant position of the Tulsa market has become more and more apparent in recent years and this dominance has now been made official by governmental decree.

Manufacturers interested in the oil industry as a source of business, and considering the establishment of branches or offices in the Southwest, are invited to write the Tulsa Chamber of Commerce for the industrial and commercial facts about Tulsa and the Southwest.

TULSA

Oil Capital of the World

East Coast Refined Products on Upward Move as Code Provisions Raise Operating Costs

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Sept. 11.—Continued strength in refined products characterized trading in East Coast markets during the last week, with prices still trending upwards as code operations result in increased costs to refiners and marketers. Featuring the week's developments was a general increase of 1 cent per gallon in tank wagon and service station gasoline in Standard of New Jersey's territory, effective September 8, accompanied by a 1-cent advance in the tank car price on which tank wagon and service station prices are based. Spot tank car gasoline, however, was advanced but one-half cent per gallon.

Furnace oil prices were showing more strength and sellers in some cases advanced their prices fractionally. Bunker "C" oil today was advanced 15 cents per barrel, bringing the market up to $1.10, the peak price specified in 1933 contracts held with the principal steamship companies by leading eastern refineries. Regardless of further price advances in bunker grade oil for domestic trade, $1.10 is the top which the steamship buyers can be called upon to pay under the terms of their contracts for the current year.

Following strengthening of the position of the crude oil market in East Texas and growing scarcity of excess output in that field export suppliers today advanced quotations for October lifting oil to $1.18 to $1.20 per barrel, f.o.b. Gulf, as compared with offerings at $1.15 at the close of the week.

Export Gasoline Higher

Export gasoline was also higher with two part cargoes of 64-66, one for England and the other for France, reported closed at 5⅝ cents per gallon, representing an increase of one-eighth cent over the closing price Saturday.

Announcement that Texas had submitted to Secretary Ickes' suggestion that an immediate order be issued restricting Texas production to 975,200 bbls. daily brought about a feeling of pronounced optimism in eastern oil trade circles. It has been generally felt here that the success or failure of the oil industry's code might be decided by Texas developments.

Rising gasoline prices and predictions that on the basis of curtailed production of crude retail gasoline price levels will be moved up an additional 2 to 3 cents per gallon, have given rise to concern as to the probable reaction of the motoring public to the code operations of the petroleum industry. While the country at large is definitely committed to the NRA program, price advances on other commodities resulting from higher operating costs incidental to code observance are already beginning to be resisted in some instances, and it is considered a question in some quarters of the trade as to whether the rise in purchasing power can keep pace with the advances in retail prices.

Widespread discussion was heard in eastern oil circles following reports that the Standard Oil Co. of New Jersey, through W. S. Farish, its chairman, had refused certain data to the oil board, and had criticized the personnel of the board as not being fully representative of the industry. These reports were answered in a statement issued by Mr. Farish in which he said that the Jersey Standard believes in the NRA program and stands ready to furnish any information at its command to aid in the administration of the oil code. "The Standard Oil Co. of New Jersey," he said, "is definitely pledged to co-operate in making the NRA a success. We are definitely pledged to aid and co-operate with the Federal agency to make the operation of the petroleum code a success. We are definitely on record with the NRA and the Federal agency as opposed to price fixing. We sincerely believe that if production of crude is kept down to consumer demand there is no need for price fixing. I state again that the Standard Oil Co. of New Jersey believes in the NRA program and is doing everything possible to make it a success and that Standard Oil of New Jersey believes the oil code without price fixing will put the petroleum industry on a satisfactory profit basis. We stand ready to furnish any information or facts at our command to aid the petroleum committee or the Federal agency in the administration of the code."

Refinery Gasoline

A general increase of one-half cent per gallon in refinery tank car quotations was the outstanding feature of last week's spot market, with trading active and jobbers keeping storage full in anticipation of further price increases in the near future. The increase in the tank car market was based upon rising quotations in the Gulf cargo market, which had moved up to 5½ cents per gallon for high octane gasoline for coastwise shipment during the week.

Sellers in New York Harbor were quoting tank car deliveries at 6.25 to 6.65 cents per gallon for U. S. Motor, with gasoline of 65 octane number and above posted at 6.90 to 7 cents per gallon. The Philadelphia market was quoted at 6½ to 6¾ cents for U. S. Motor and 6½ to 7 cents for the high octane product. At Boston, sellers were posting unadvertised gasoline at 6.70 cents per gallon, with the featured grade at 6.95 cents, while the Baltimore market was posted at 6¾ to 7 cents for the high octane grade and 6¼ to 6½ cents for U. S. Motor. At Charleston, tank car sellers posted ordinary U. S. Motor gasoline at 6¼ to 6½ cents per gallon, with gasoline of 65 octane number and above at 6½ to 7 cents per gallon.

There was confusion in the tank car price level during the week, and price differentials between leading sellers were much more common than is usually the case. It was generally felt that barring some unexpected action at Washington, the upward move in refinery gasoline prices has not yet run its course, and that further advances are in prospect.

The American Petroleum Institute announced that refinery stocks of gasoline for the country as a whole had shown a decline of 1,067,000 bbls. during the week ended September 2, this reduction offsetting advances in these stocks aggregating a slightly larger total during the preceding fortnight.

Reports from the field this week indicate continued bullishness in the position of crude oil markets, and additional increases in posted prices are looked for at any time which, of course, would be reflected in a further tightening in the gasoline position.

Tank Wagon Gasoline

The outstanding development of the week in this area was the action of the Standard Oil Co. of New Jersey and Standard of Louisiana in advancing tank wagon and service station gasoline prices 1 cent per gallon, the higher price levels going into effect on September 8. Competing companies in the area affected met the advance.

While gasoline is trending upwards in wholesale markets in the New York and New England area, the tank wagon price structure has not yet risen. It was expected, however, that an advance of one-half to 1 cent per gallon would be put into effect the early part of the current week.

Notwithstanding unfavorable weather conditions, gallonage over the Labor Day week end was exceptionally heavy, and business was well maintained during the week which followed. The latest price advance put into effect here has not had any appreciable effect upon consumption, although leading marketers are inclined to endeavor to stem the upward move

(Continued on Page 38)

Exports and Imports of Refined Products; Receipts of California Oil in the East

NEW YORK, Sept. 11.—With Federal price fixing of crude oil and gasoline postponed, temporarily at least, the export market was showing a tendency to return to a trading basis during the past week, with the price trend definitely toward higher levels, in sympathy with the domestic trend. At the beginning of the week export gasoline was offered at 4¾ cents per gallon for U. S. Motor, with 64-66 375 endpoint, held at 5 cents minimum, but the market strengthened and at the close of the week asking prices were 5 cents and 5¼ cents, respectively, for these grades. Export operators were greatly encouraged by cables from abroad indicating that Rumanian export quotations had advanced to the point where U. S. Gulf quotations were now on a competitive basis, and it is expected that a number of export contracts will be closed for shipment out of the Gulf this week. Inquiries for four or five part cargoes of gasoline, for nearby lifting for England and the Continent, were under negotiation during the past week. Export kerosene, however, was quiet and unchanged at the Gulf.

Crude oil for export was quoted at $1.10 to $1.15 per barrel during the early part of the week, f.o.b. Gulf export terminals, for prompt and October shipment. With crude oil prices in the field on the upward move, however, and indications pointing to a minimum price of $1 for crude oil at the well in the near future, export sellers were not inclined to make forward committments on export crude oil. Venezuelan crude was working into firmer position during the week, although some of this oil could still be bought at 65 cents per barrel. Mexican heavy oil, a so-called "specialty crude," was unchanged at 55 cents per barrel, f.o.b. port, plus taxes. With the export market on domestic crude oil advancing steadily, Venezuela crude is expected to come in for increasing demand on the part of European refiners who are still drawing the bulk of their crude petroleum requirements from the western hemisphere.

California Oil Receipts

Receipts of California refined oil at Atlantic Coast ports during the week ended September 2 (there were no receipts of California oil at Gulf ports during the period) totaled 407,000 bbls., a daily average of 58,143 bbls., compared with 170,000 bbls., a daily average of 24,286 bbls. during the previous week and a daily average of 45,714 bbls. for the four weeks ended September 2. Details follow:

(Barrels of 42 gallons)

At Atlantic Coast Ports—	Bbls.
Boston	102,000
New York	118,000
Philadelphia	119,000
Others	68,000
Total	407,000
Daily average	58,143

The week's receipts of California oil were made up of 367,000 bbls. of gasoline and 40,000 bbls. of fuel oil.

At the close of the week the following cargoes were reported afloat for East Coast ports from California:

For New York: 113,000 bbls. of gasoline on the Socony-Vacuum Transportation Corp. tanker Daylight.

For Baltimore-Tiverton: 56,000 bbls. of gas oil on the Standard Oil Co. of California tanker H. M. Storey.

Petroleum Exports

Higher prices for export oil are reflected in a falling off in export shipments locally. The following table shows exports of principal refined petroleum products reported from the port of New York during the three weeks ended September 2 (all figures in gallons unless otherwise noted):

	Week ended		
	Sept. 2	Aug. 26	Aug. 19
Gasoline	112,000	27,000	
Naphtha	240,000	132,000	
Kerosene	1,000	13,000	30,000
Fuel and gas oil	3,000	5,000	610,000
Lub oil	560,000	1,016,000	872,000
Pet., refined	10,000	466,000	53,886
	Pounds		
Petrolatum			150,000
Paraffin wax	720,000	685,000	850,900
Refined	70,000		70,000
Scale	105,000	100,000	90,000
Lub grease	895,000	535,000	1,276,000

Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended September 2 totaled 1,230,000 bbls., a daily average of 175,714 bbls., compared with 1,081,000 bbls., a daily average of 154,429 bbls., for the previous week, and a daily average of 173,393 bbls. for the four weeks ended September 2. Details follow:

(Barrels of 42 gallons)

At Atlantic Coast Ports—	Bbls.
Baltimore	152,000
New York	597,000
Philadelphia	109,000
Others	72,000
Total	1,230,000
Daily average	175,714

The week's imports comprised 849,000 bbls. of crude oil and 381,000 bbls. of fuel oil. Imports of the latter have shown a material increase during the past few months, due to the higher markets for bunker fuel oil at Atlantic ports and the relative scarcity of this oil.

Following 1½ Cent Higher Retail Gasoline Price Chicago Refinery Market Advances Sharply

By R. C. CONINE
Chicago Bureau, The Oil and Gas Journal

CHICAGO, Sept. 11.—Gasoline tank car markets, particularly in the low octane grades, reacted promptly to the 1-cent service station and tank wagon advance made throughout its territory Saturday by Standard Oil Co. (Indiana). While the recent advances total 1½ cents, the one-half cent of the advance was absorbed by the widening of the margin to authorized agents and other resellers by half a cent. Allowance for rental remain at half a cent so that the total discount is now 3.5 cents off the service station price on the regular and premium grades, and 2.5 cents on the third grade. Discounts off the tank wagon price to large consumers remains unchanged at 2.5 cents off for the regular and premium grades and 1.5 cents off for the third grade in Chicago district. This discount is 0.5 cent less outside of the district.

Volume Still on Contract

In spite of the retail advances already in effect, and the strong feeling that further crude oil advances are coming bringing still higher service station postings, jobber buying in the open markets continues small. While a number of refiners are understood to have withdrawn from the spot markets, a check revealed that even after the general retail price advance certain refiners were actively looking for business at a slight price sacrifice. It is known that some of the larger distributors who have been buying heavily have reached the stopping point and must begin promptly to realize on their investments.

It is common knowledge in Chicago district oil trade circles that certain major and semimajor refiners are delivering gasoline at prices as much as 6.25 cents under the normal service station postings, while others are moving motor fuel to contract customers at three-eighths of a cent under the average, if not the low, of the published quotations. Naturally, it is not difficult to see that these inducements can put a serious crimp in spot buying. In fact, these contracts are responsible directly for nine-tenths of the demoralization which has afflicted the gasoline markets. There is much conjecture as to the result publicity will have on these contracts.

If the 5-cent marginal guarantee were universal at this time, the spot markets would undoubtedly be humming. With a price of 17.8 cents at the service station for the regular grade, the jobber's buying price would be 12.8 cents, then deducting Group 3 freight and 4.5 cents state and Federal taxes the net back to the refinery would be 5.86 cents. The spot market price, however, is 4.75 to 5.25 cents, Group 3, on the "regular" grade, and if 70 octane material were insisted upon, such gasoline is offered in a range of 5.25 to 5.75 cents, still under the contract price. The jobber buying on the open market today would pay 11.69 cents laid down price, tax paid. He could give his customers the regular Q.D.A. and rental, totaling 3.5 cents, leaving a margin of 2.61 cents. Buying on the 5-cent marginal guarantee his residue would drop to 1.5 cents. A jobber could not operate long under either of these margins, so it is a practical certainty that the larger part of the contracts now in effect are detrimental to the refiners' interests.

Correct Other Retail Prices

The gasoline markets, wholesale and retail, are fairly running away from the other refined petroleum products. Tank wagon markets on kerosenes, special naphthas, distillates and fuel oils have remained stationary. However, it is confidently expected that today announcements of price advances in these tank wagon markets will be made. In the tank car markets these products have lagged but slightly, and while the consuming season for the heating oils is not far away, there does not appear to be any large supply in sight, and many jobbers and distributors are far from sure of an adequate source.

The gasoline tank car markets appear to discount the fact that heavy shipments without consignee have been made into the district. Another advance in the service station and tank wagon prices is required, however, to start any real jobber buying on the open markets, and this advance must be at least a cent. Jobbers are reported to be taking only their day to day requirements, so there should be enough business waiting for the turn to take care of much of the gasoline lying at sidings on leased trackage.

The regular and premium grade gasolines of guaranteed octane rating do not indicate their real strength pricewise for the reason that their position has been far less questioned than that of the third grade, and the price has been three-quarters of a cent to 1¼ cents higher than the third grade. Monday's prices show the third grade material moving up to 4¼ cents to 4⅝ cents, narrowing the price disparity by a quarter of a cent. In the gravity materials the differentials are narrow at this time, and will probably continue so for the duration of the current hot spell. Prices Monday were as follows: U. S. Motor grades, regular, 4¾ to 5¼ cents; premium, 5¼ to 5¾ cents; third grade, 4¼ to 4½ cents. High test grades: 60-62 400 endpoint, advanced a quarter of a cent to a range of 4⅝ to 4⅝ cents; 64-66 375 endpoint gasoline advanced a quarter of a cent to a range of 4½ to 4⅝ cents; 68-70 360 endpoint gasoline, advanced an eighth of a cent to a range of 4½ to 4¾ cents. It is the policy of most refiners to quote fighting grade avintion at a cent above the U.S.M. third grade. This material advanced to a range of 5¼ to 5¾ cents.

Special Naphtha Tank Car Prices

Because there are comparatively few sources for specifications special naphthas although competition is keener, probably, than in other markets, the sellers are having a little difficulty getting under way for higher prices. One large seller of special naphthas says that as he must sell at the published prices there is nothing that he can do about the markets until the publications show advances. The idea that the publications are price-fixing organs appears fairly general.

Deep Rock Oil Corp., which had withdrawn from the open special naphtha tank car markets, has resumed quoting prices at the ruling levels.

Kerosene Tank Car Markets

The kerosene tank car markets have received no support on the retail end, but now appear on their way upward far behind gasoline. Prices early Monday were up an eighth of a cent, with a price of 2⅜ to 2⅞ cents for the 41-43 water white material, and 2⅞ to 3 cents for the 42-44 water white kerosene. In the tank wagon markets kerosene normally occupies a position half a cent under the price, minus taxes, of regular grade gasoline at the service station. The price of the regular less tax is 12.8 cents, and half a cent under this is 12.3 cents, what the kerosene tank wagon price would be if proportionate advances had been made, instead of the 8.7 cents price which is still in effect.

Distillates and Fuel Oils

Distillates, gas oil and two lighter fuel oils show advances this week. These materials are increasingly scarce. One large refiner who supplied a major part of the trade with these materials last year bases his prices on the fuel oils on the average price plus 10 cents a barrel, and he adds half a cent to the average prices on the distillates. Monday's ruling prices were: 38-40 prime white distillate, 2½ to 2⅝ cents; 38-40 straw zero, 2⅝ to 2½ cents; 32-36 straw zero, 2¼ to 2⅜ cents, all up an eighth of a cent. Industrial gas oil also moved up an eighth of a cent to a range of 1⅝ to 1⅞ cents. The 28-30 zero fuel oil has advanced to a range of 80 to 87½ cents, and the 26-28 zero material moved up less actively to a range of 70 to 75 cents.

Seek Restraining Order

The Panama Refining Co. and others have brought suit against A. D. Ryan and others in the U. S. District Court at Tyler to prevent the latter from coming on its properties, interfering with the producing of its wells, or checking over its records or in any other way interfering with the operation of its properties.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

September 6, 1908

The first well drilled to the Mounds sand (eight years later called the Wilcox sand) was Swazey's No. 1 Korndorfer, in the NW Section 18-16-12, Mounds district, Creek County, Oklahoma, in the spring of 1908. Sand was found at 2,356 feet and the well started at 250 bbls. per day of high gravity oil. Numerous other wells have since been drilled to that depth in Township 16-12, and the Laurel Oil & Gas Co., Eastern Oil Co. and Selby Oil & Gas Co. each has completed Mounds sand producers in Section 29-17-12.

Norman W. Hendershot, manager of the National Supply Co. at Beaumont, Tex., is the proud father of a 12-pound boy, born September 8, whom he has named Norman W., Jr. This puts Mr. Hendershot in the lead in the race for the Beaumont Wheeling Club's pennant to be awarded the father of the prize baby of the year.

There are no oil or gas wells of importance in Oklahoma south of the Okmulgee and Morris Pools in Okmulgee County.

20 Years Ago

September 18, 1913

Mr. and Mrs. Oscar Howard, of Tulsa, have returned from a summer trip in Iowa. They traveled the entire distance in their touring car.

Mr. and Mrs. C. E. Crawley have returned to Tulsa from their wedding trip. Mr. Crawley is head of the land department for the Gulf Pipe Line Co. in Tulsa.

R. W. McIlvain, formerly with the Trees Oil Co., but now an independent operator in Oklahoma, is looking over the North Louisiana fields.

Oil is discovered near Newkirk, Kay County, Oklahoma.

The Electra Field in Wichita County, Texas, is the largest producing field in that State. Texas produced an average of 41,600 bbls. a day in August and Electra produced 23,000 bbls., or considerably over half of it.

10 Years Ago

September 13, 1923

The Standard Oil Co. of California has completed the deepest well in the State. It was abandoned as dry at 6,680 feet. It cost over $300,000.

James E. O'Neil resigns as president of the Prairie Oil & Gas Co. because of ill health. He had been at the head of the company since 1905 and under his leadership it has always maintained its position as the dominant crude oil purchasing and marketing company in the Mid-Continent Field.

Crude oil prices in the Mid-Continent gravity fields have been reduced to $1.40 per barrel for 36 gravity oil. The prices range from 90 cents to $2 per barrel.

The 12 members of the board of directors of the Standard Oil Co. of New Jersey average 53 years of age, and average 33 years per man of service with the company.

J. Chalmers Gillespie, assistant secretary of the Tidal Oil Co., dies in Tulsa.

There are 1,062 rigs up and 3,935 drilling wells in the fields east of California, a total of 4,997 operations started. This is a decline of 656 operations from the previous month due to overproduction of crude and threatened lower prices.

A rotary test in Spain has drilled 4,525 feet in 90 working days.

Rise in Mid-Continent Refinery Runs Continues

(Continued from Page 8)

REFINERY OPERATIONS IN WEST TEXAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Sept.	Aug.
Active Oil Corp., Arno	1,500	(*)	(*)
Aero Refining Co., Pecos Valley	225	(*)	(*)
Bobrose Oil & Refineries, Luling	2,500	200	200
Coltex Refining Co., Colorado	12,500	7,000	7,000
Concho Refining Co., San Angelo	500	100	100
Cosden Oil Co., Big Spring	15,000	4,000	4,000
Pentex Refining Co., Echo	400	50	50
Grayburg Oil Co., San Antonio	6,000	(*)	(*)
Gulf Refining Co., Sweetwater	5,000	4,000	4,000
Howard County Refining Co., Big Spring	1,500	300	300
Humble Oil & Refining Co., San Antonio	5,000	2,875	2,750
Magnolia Petroleum Co., Luling	7,000	4,500	4,400
McNutt Refining Co., El Paso	2,000	700	700
Marathon Oil Co., Del Rio	5,000	(*)	(*)
Moutray Refining Co., Hawley	600	300	300
Misko Refineries, Inc., Mirando City	2,500	1,200	1,300
Nolting Refining Co., Sweetwater	1,000	200	200
Octane Refining Co., Beard	2,000	1,200	1,200
Paramount Refining Co., San Angelo	2,000	200	200
Pasotex Petroleum Co., El Paso	14,000	(*)	(*)
Phoenix Refining Co., Pettus	800	400	400
Phoenix Refining Co., Laredo	600	300	300
Pioneer Oil & Refining Co., Somerset	1,500	800	800
Shamrock Oil & Gas Co., Lefors	1,200	(†)	....
Sinclair Refining Co., El Paso	2,500	2,500	600
Texas Co., San Antonio	3,000	1,500	1,500
Texas Co., El Paso	2,000	800	800
Texas Petroleum Products Co., Somerset	1,500	400	400
West Texas Refining Co., Pecos City	6,000	3,000	3,000
Wickett Petroleum Co., Wickett	2,500	400	400
Total	107,825	36,925	31,900

*Shut down. †Building.

REFINERY OPERATIONS IN EAST TEXAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Sept.	Aug.
Abbey Refining Co., Gladewater	586	200	285
Alamo Refining Co., Camps Switch	2,500	360	(*)
Arp Refining Co., Arp	2,000	600	500
Arpana Refining Co., Arp	3,000	1,940	1,800
Arrow Refining & Producing Co., Overton	2,500	1,360	(*)
Beacon Oil & Refining Co., Henderson	4,500	3,000	3,000
Big Five Refining Co., Gladewater	188	95	(*)
Canyon Refining Co., Kilgore	500	400	125
Carnation Refining Corp., Gladewater	350	250	(*)
Century Refining Co., Friars Switch	2,000	840	(*)
Chief Refining Co., Gladewater	1,500	1,100	1,200
Cook (R. X.), Gladewater	200	50	50
Danciger Refineries, Inc., Longview	10,000	7,000	7,500
Dutch Rose Refining Co., Gladewater	300	250	100
East Texas Refining Co., Longview	12,000	8,350	8,500
Foshee Refining Co., Gladewater	1,000	800	(*)
Gladetex Refining Co., Gladewater	500	100	(*)
Gilliland Refining Co., Gladewater	1,500	1,100	1,200
Gilmer Refining Co., Gilmer	500	(*)	(*)
Goodson-Gentry Refining Co., Gladewater	500	90	(*)
Henderson Refining Co., Henderson	10,000	(*)	(*)
Jack Refining Co., Gladewater	350	(*)	(*)
Johnsonville Refining Co., Omega	200	(*)	(*)
Keller Refining Co., Kilgore	1,000	(*)	(*)
Kilgore Refining Co., Kilgore	3,000	(*)	2,900
Lake Refining Co., Gladewater	1,000	800	450
Locke Refining Co., Gladewater	900	800	(*)
Lotus Refining Co., Gladewater	100	59	(*)
Modern Refining Corp., Gladewater	1,500	750	900
O. K. Refining Co., Kilgore	1,000	(*)	(*)
Oil Refineries, Inc., Overton	4,000	3,400	3,500
Overton Refining Co., Overton	3,500	2,100	2,800
Panama Refining Co., Kilgore	250	400	(*)
Pennant Refining Co., Kilgore	1,000	700	700
Rodessa Refining Co., Turnerstown	200	80	100
Reese Refining Co., Arp	500	500	(*)
Rockett Refining Co., Kilgore	200	(*)	(*)
Rusk Oil & Refining Co., Overton	3,000	1,800	700
Roland Refining Co., Arp	250	(*)	(*)
Shoreline Refining Co., Kilgore	500	(*)	(*)
Sinclair Refining Co., Camps Switch	5,000	2,000	1,700
Smith & Maxey Refining Co., Kilgore	150	(*)	(*)
Solar Refining Co., Overton	5,000	(†)	(†)
Southern Refining Co., Reeds Switch	2,500	700	1,000
Southport Refining Co., Kilgore	1,000	950	250
Supreme Refining Co., Gladewater	300	150	(*)
Taylor Refining Co., Tyler	15,000	8,000	9,000
Texas Oil Products Co., Gladewater	2,000	1,800	2,000
Texas Refining Co., Kilgore	1,000	300	450
Trico Refining Co., Turnerstown	200	(*)	(*)
Trinity Refining Co., Gladewater	1,500	1,250	1,200
Tyler Refining Co., Arp	1,500	1,300	1,350
Union Refining Co., Camps Switch	3,000	2,000	1,800
Unit Refining Co., Kilgore	200	(*)	(*)
Upshur Refining Co., Gladewater	500	450	320
Total	114,700	56,575	55,380

*Shut down. †Cracking only.

REFINERY OPERATIONS IN ARKANSAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Sept.	Aug.
Berry Asphalt Co., Waterloo	2,000	500	500
Henry H. Cross Co., Smackover	6,000	3,000	3,000
Lion Oil Refining Co., El Dorado	12,000	8,000	8,000
Macmillan Petroleum Products Co., Norphlet	2,000	1,600	1,600
Ouachita Valley Refining Co., El Dorado	1,500	1,200	1,350
Root Refining Co., El Dorado	10,000	4,500	4,500
Simms Oil Co., Smackover	3,000	2,500	2,500
Stephens Refining Co., Stephens	750	450	200
Total	37,250	21,750	21,650

REFINERY OPERATIONS IN NORTH LOUISIANA

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Sept.	Aug.
Bayou State Refining Co., Hosston	750	200	(*)
Cedar Grove Refining Co., Shreveport	1,000	750	1,000
Louisiana Oil Refining Co., Shreveport, Bossier	19,000	17,500	17,000
Spartan Refining Co., Shreveport	10,000	5,500	5,500
Stanolind Oil & Gas Co., Superior	3,500	2,000	1,800
Texas Co., Shreveport	7,000	(*)	(*)
Shreveport Refining Co., Shreveport	500	450	(*)
Total	41,750	26,400	25,300

*Shut down.

REFINERY OPERATIONS IN KANSAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Aver. daily runs Sept.	Aug.
Altitude Petroleum Corp., Chanute	5,000	(†)	(†)
Altitude Petroleum Corp., Kansas City, Mo.	3,000	600	600
Barnsdall Refineries, Inc., Wichita	4,000	3,000	3,000
Derby Oil Co., Wichita	8,000	5,000	4,000
Dickey Refining Co., McPherson	5,000	1,000	1,000
Eldorado Refining Co., Eldorado	4,500	3,000	3,200
Falcon Refining Co., Inc., Great Bend	700	450	400
Globe Oil & Refining Co., McPherson	10,000	8,500	9,000
Golden Rule Refining Co., Wichita	1,500	900	900
Kanotex Refining Co., Arkansas City	12,000	8,000	8,200
National Refining Co., Coffeyville	6,500	5,000	5,900
Phillips Petroleum Co., Kansas City	15,000	8,500	8,000
Shell Petroleum Corp., Arkansas City	22,000	18,000	18,000
Sinclair Refining Co., Coffeyville	12,000	10,000	10,000
Sinclair Refining Co., Argentine	9,500	5,000	5,000
Skelly Oil Co., Eldorado	23,000	15,000	15,000
Standard Oil Co. of Kansas, Neodesha	20,000	6,000	5,000
Sunflower Refining Corp., Hutchinson	2,000	(*)	1,500
Vickers Petroleum Co., Potwin	3,500	2,000	3,000
White Eagle Refining Co., Augusta	16,000	12,500	13,000
Total	183,200	112,450	114,000

*Shut down. †Cracking only.

Eastern Coast Refined Products Move Upward

(Continued from Page 36)

ment in retail prices as long as possible, in order to prevent the price rise in gasoline from outstripping the gain in purchasing power of consumers.

There are predictions by statistical organizations interested in higher oil prices that a retail market of 25 cents per gallon or more will be witnessed in the East by the close of the year. Propaganda of this type is being strongly frowned upon by refiners and marketers as being calculated, in the final analysis, to restrict consumption through inducing prospective buyers of new automobiles to defer their purchases and influencing car owners who have not yet experienced any increase in income to put their cars into dead storage for the winter months.

Substantial increases in the personnel of marketing departments of many oil companies are reported as a result of the NRA program, and independent station operators are also increasing their staffs.

Kerosene

Refiners are still talking a higher market for kerosene, but the advance has not yet eventuated, and 41-43 water white in tank car lots can still be bought at 5 to 5¼ cents per gallon f.o.b. refineries or terminals. There has been a continued good demand reported during the week, and stocks held at refineries in this area continue moderate, with additional shipments from California and the Gulf Coast scheduled to round out the supplies of marketers on the Atlantic Seaboard.

Marketers are surveying their retail price structures, and it is expected that a general advance of 1-cent per gallon in tank wagon quotations will shortly be made effective. Gallonage is reported to be holding up extremely well in most parts of the territory.

Furnace Oil

Refinery prices are stiffening and sellers in some instances have advanced their posted prices by one-half cent per gallon. Current tank car quotations are 5 to 5½ cents per gallon for 36-40 oil (No. 1 grade), 4 to 4½ cents for 32-36 (No. 2) and 3½ to 4 cents per gallon for 21 gravity (industrial burner) oil, f.o.b. refineries.

Tank wagon furnace oil quotations are still unchanged, but sellers are now adding a clause to their seasonal contracts providing for higher prices to offset any taxes or increased costs which may result from operation of the NRA code. Indications point to a record gallonage on domestic heating oils in the East this season.

Bunker Oil

The market continues strong at the recently advanced level of 95 cents per barrel, f.o.b. terminals, for Bunker "C" with a 5-cent concession still in effect in New York Harbor to contract buyers operating ocean-going steamships.

It is reported here that a further advance of 15 cents per barrel will be put into effect on bunker oil within the next few days, which will bring the general market up to $1.10 per barrel, the top price permitted under 1933 contracts. Fuel oil prices are trending upwards in the California and Gulf cargo markets, with offerings for prompt and nearby lifting rather limited.

Diesel Oil

Marine consumption is on the increase and the market continues steady at $1.75 per barrel for 28-30 gravity oil, f.o.b. terminals, and $1.81½ per barrel f.a.s. within harbor limits here. An advance of 10 to 15 cents per barrel on this oil is a distinct possibility for the near future.

Domestic sales are showing some increase and the market continues firm at 4 cents per gallon for 26-30 gravity oil in tank car lots, f.o.b. refineries or refinery terminals.

Gas Oil

Refiners report a more active demand for gas oil and the market tone is steadily strengthening. Offerings are still being made at 4 cents per gallon for gas oil of 28 degrees gravity minimum, but sellers are looking for an early advance to 4 cents.

Gas oil in cargo lots is firmer both at the Gulf and in California, and the local market is expected shortly to reflect the stronger price levels developing at those points.

Wax

There were no price changes reported on refined wax last week, either for domestic or export shipment. Demand has fallen off considerably with buyers definitely resisting recent price advances.

While the market situation at the refineries is stronger, reflecting higher crude costs, refiners are not inclined to mark their prices upwards, pending a resumption of more general activity in the market.

Lubs

Refiners and marketers were experiencing a relatively light demand for cylinder oils and bright stocks during the past week, and quotations remained unchanged at the previous week's levels. The recent sharp advance in posted prices for these oils appears to have outrun demand somewhat, and as a result refiners were unable to take advantage of the further strengthening of eastern crude prices by another mark-up on lub prices.

Spot buying of pale and red oils, however, has continued to pick up steadily, and sellers report a substantial improvement in gallonage. Contract buyers are also ordering forward tank car shipments in greater volume than heretofore, and the price basis is well maintained on all grades.

LLOYD LAYNE DIES

Lloyd Layne, 42, president of Layne & Bowler, Inc., and subsidiary companies, including the Layne-Texas Co. of Houston, died Friday in Gartly-Ramsay Hospital, Memphis, Tenn., after three weeks' illness.

Mr. Layne was educated in the public schools of Houston and was later connected with Layne & Bowler Co. in the manufacture of oil and water well screens. When Layne & Bowler, Inc., was formed in Memphis for the manufacture of deep well pumps, he moved to Memphis in 1916.

Gasoline Tax Money Is Diverted From Roads

(Continued from Page 18)

was due to two causes; first, the population was not saturated with automobiles. There were many people wanting cars who did not have them and were constantly buying; today the country is about saturated with cars. Replacement is about the only avenue left to the car producer. Second, there were inadequate roads. Today there are highways in every state where people can run their cars to their hearts' content. This saturation of the population with cars, and the completion of adequate highways, have altered this situation. The law of diminishing returns is in full operation, and I need not take the time to demonstrate this generally recognized fact.

Turn for a moment to the details of diversion. In 1927 there were diverted $5,296,921; in 1933 legislative diversions, apart from illegal official diversions, amounted to $121,987,591, or an increase of $116,690,670, or more than 2,200 per cent. At this rate of increase, in five years there will be little money left in highway funds for the building and maintenance of roads. If the tax burden on petroleum products continues to increase during the next five years, as it has during the past five years, the oil industry will be bearing a very large portion of all governmental costs in the United States. It will be bearing such a burden that this basic industry will be so handicapped by taxation that it will amount to a public calamity. I need not point out to you gentlemen that the crucifiction of one of the four basic industries in the country will react in such a manner as to affect all lines of business and seriously affect the common good.

You gentlemen will say that this tax is passed on to the users of petroleum products and that the problem is one which concerns the people generally rather than the oil industry. Let us examine this proposition. It is true that if demand exceeds supply, or more properly speaking, if consumption runs ahead of production, that business passes the tax on the consumer. However, with production outrunning consumption and a falling market, business must absorb a very large amount of the tax. Overproduction always results in excessive competition. Distress goods must be sold to save the producer from bankruptcy. The goods of production and the selling price tend to approach each other until there is no place for both the tax and profit. The tax eats up the profit. Moreover, if Jones can only find $100 for the purchase of gasoline, he will obviously purchase more gasoline if he is not encumbered with a 5-cent tax. High-priced goods means lessened consumption, just as surely as low-priced goods means increased consumption.

As the amount of gasoline consumed decreases, marketing organizations must be curtailed to keep out of the red, men are laid off, and unemployment is increased. Obviously, if the marketer fails to sell, then refining must also decrease; crude cannot be consumed, and the income of well owners over a wide area is greatly depleted. This is the beginning of a vicious circle which affects manufacturers of all automotive vehicles and all the allied industries, which in turn affects other industries because of greatly decreased consuming ability, and we are off on the beginning of what is known in this country as a "depression."

Taxes at Staggering Figure

At this point I cannot help reminding you that some years ago I prophesied a $15,000,000,000 tax bill for the people in the United States. In spite of all the talk about economy and the reduction of the cost of government, so far as I know, every governmental unit, from that of the Federal Government down to "Whoop-hole" township, have continued to increase their costs of operation. We have passed the $15,000,000,000 mark and are now launched well upon our way to a $20,000,000,000 cost of government.

Returning to the subject of the gas tax, this is not the only burden which the motorists have to bear, as well as the oil industry. There are license fees and ad valorem taxes and God knows what, which fall upon this luckless industry and the users of its products. So that all in all, the tax burden upon the motorist, assuming that he pays the gasoline tax, is getting well on toward $1,250,000,000, while you gentlemen are busy trying to build a concrete road upon every section line in the United States. "Oh, but" someone says, "Uncle Sam has been helping us." Yes, Uncle Sam has been helping us. Here is the record. Beginning with the year 1918 and extending through the first 10 months of 1933, Uncle Sam collected from the oil companies and motorists of this country, in round figures, $1,260,000,000, and appropriated back to the states for Federal aid to road work $1,190,000,000. Make no mistake. The oil industry, meaning by that term the employes, stockholders, and owners, plus the motorists, have borne all the burden of roadmaking in the United States, and now they are in a fair way to be saddled with a large portion of the cost of all government, if diversion, which is well on the way, is allowed to reach fruition.

I assume that you gentlemen concur in my conclusion that such diversion violates all the laws of equitable taxation, and is a gross injustice to a great industry, and works upon it a very great hardship. I feel that you will agree with me that the imposition of special taxes upon petroleum products which are greater than special taxes imposed upon like or similar objects, is an injustice. There is no more reason why governments should be supported by a tax on gasoline and lubricating oils than that it should be supported by a tax upon steel or cement, or any other of the modern manufactured products which are essential to society.

The present burden has already slowed down consumption of motor fuel. It has curtailed the use of automotive equipment, and hence the use of the splendid highways which have been built during the past decade throughout the United States. It rests today, a veritable old man of the sea, upon the backs of practically all of the people of the United States.

As we move out of the present depression, and as prices continue to mount, this tax will become seemingly an ever and ever heavier burden. During the past 10 years the price of motor fuel declined until it rested on the bedrock of existence — hundreds of oil companies have disappeared throughout the country, and all are today struggling for existence. This has tended to hide the burden of the tax. As the prices mount the burden will become more conspicuous, and if the tax continues to mount, will meet with a revolt on the part of the American people.

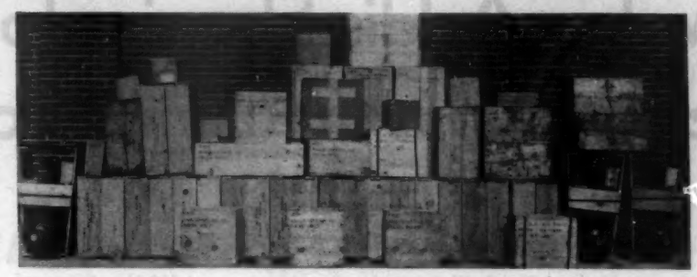
There is no doubt in my mind that those obsessed with the idea of piling yet heavier burdens upon this industry, if not restrained, will continue in their career of madness, until the burden upon the automotive users of the country will not be a billion dollars, but a billion and a quarter, a billion and a half, a billion and three-quarters, two billion, on and up, until it is halted by revolt of the users of motor fuel, which almost coincides with the population of the country. Not only must they be stopped, but the tax must be decreased, if it is to continue as a part of the revenue system of the political units of this country. Diversion must be stopped, and the tax brought within reason—it must be made equitable by being made comparable to burdens upon similar objects of taxation.

More and more, motor fuel and automotive transportation is becoming entwined with the economic life of the country. To hamper the use of the highways or the use of automotive vehicles by excessive taxation or regulation, places a very distinct hardship upon the common man. It is his method of travel, and in a great measure his method of hauling his produce to market, and receiving those commodities he buys, delivered at his door.

The unreasonable tax burden imposed upon products of petroleum works a great hardship to the industry, but works a greater hardship upon the common man. It deprives him of his principal source of travel and recreation, and increases the cost of many of the things which are essential not only to his well being, but to his health. It is his battle as well as that of the industry.

I close with the plea to this conference for justice, not only for the oil industry, but for the users of automotive vehicles on the highways of this country. The industry cannot long survive if the tax burdens are to continue to increase in the future as in the past, and the free use by free people of their own highways will be curtailed until it amounts to a national calamity.

Hanlon-Waters Build Equipment for Gregg-Tex Plant



Part of a shipment of Hanlon-Waters automatic regulating equipment to Gregg-Tex Gasoline Corp.

In the new gasoline plant being built in East Texas by the Gregg-Tex Gasoline Corp. the automatic regulating and control equipment has been designed and built by Hanlon-Waters Co., Inc., Tulsa. The Gregg-Tex is one of the largest natural gasoline plants in the East Texas Field and incorporates many improvements and unique features.

Hanlon-Waters recently announced their own manufacturing facilities with plant in Tulsa for the building of all types of regulating and control equipment for the oil and gas refining and natural gasoline industries. The company for years has handled the distribution and sales of this type of equipment and has pioneered improvements now incorporated in regulating and control equipment for these industries. Men in the executive personnel of this company have spent their lives in the petroleum and allied industries, the experience of some going back as far as the first natural gasoline plants built in West Virginia and the early days of the petroleum industry.

The location of a manufacturing plant in Tulsa brings to the natural gasoline and refining industries a plant located in the center of the Mid-Continent with the consequent improvement in field service, as parts often are shipped by truck or plane to reach their most distant destinations within a day or less. The new executive offices of Hanlon-Waters are in the Exchange Bank Building in Tulsa.

IMPORTANT BOOKS
for the Oil Man's Library

"GEOLOGY OF PETROLEUM"

Prof. William H. Emmons, Ph.D., is head of the geology and mineralogy department of the University of Minnesota, and as such has recognized the need for a "Geology of Petroleum" that will serve the needs of the layman and geologist alike. In this second edition of his book he has brought the data up to date of publication (1931) and has dealt with geology as it interests those in the petroleum industry in a very instructive and interesting manner.

Many people are prone to believe that geology is a subject so involved with scientific and technical terms that it is impossible for them to have any concept of it without taking a college course. Nothing is further from the facts, for anyone can make a study of geology most interesting if he will but give time to the reading of such books as Professor Emmons has prepared. It is not full of long words and high-sounding phrases, but is written in such a manner as to present this very interesting subject in clear English.

The book can serve as a textbook for the classroom or as a reference book for the home or office. It is divided into 22 chapters. A brief introduction is followed by an explanation of surface indications of petroleum and materials associated with it and reservoir rocks. Professor Emmons then describes some of the properties of petroleum, gas and oil field waters, and the origin of petroleum.

Having laid this groundwork covering the occurrence of oil, maps and logs of wells are next discussed and then the theory of oil accumulation and the structural features of oil and gas reservoirs. Chapters 9 and 10 discuss the behavior of wells and rock pressure and deformation of petroliferous strata. Next following is a detailed discussion of the several oil provinces of this country and also brief descriptions of oil in foreign countries.

The book contains 736 pages and is fully illustrated. Maps of areas and fields with cross-sections of the producing formations and typical generalized geological sections are scattered through the book and form the basis for valuable reference information.

"Geology of Petroleum" may be purchased through the Book Department of The Oil and Gas Journal at the regular postpaid price of $6. Check or money order for this sum must be received before the book can be mailed.

Three in Cowden-Addis Showing for Producers; Four More Locations in Runnels County Area

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Sept. 11.—Three wells in the Cowden-Addis area in Ector County are showing for producers. Moran Drilling Co.'s No. 1 R. W. Smith in Section 12, Block 43, Township 1n, T.&P. Survey, was shot with 200 quarts at 4,209-23, 4,233-73 and 4,280-4,360 feet. The well did not clean out after shot but bridged 500 feet off bottom, was later cleaned out to 30 feet of bottom of hole, and filled with 2,000 feet of oil in 20 hours in 6-inch hole. This test will no doubt be a small well, and it appears now to be near the edge of production. Stanolind Oil & Gas Co.'s No. 2 Elliott Cowden got its first showing of oil at 4,015 feet after missing the upper gas pay found at around 3,840 feet. The test is now shut down at a total depth of 4,060 feet with 500 feet of oil in the hole. It will no doubt make a small well, as it took 24 hours for the oil to rise to this level. Location is in Section 26, Block 46, Township 2s, T.&P. Survey.

Stanolind Oil & Gas Co.'s No. 3 J. M. Cowden, in Section 34, Block 43, Township 1n, T.&P. Survey, is now drilling at 4,041 feet. This test had its first gas at 3,965 feet and an increase at 3,980-86 feet which was increased to about 1,000,000 feet at 4,041 feet. Fred Turner's No. 1-A Addis which is trying to increase production by drilling deeper is drilling at 4,175 feet in gray lime. The well is flowing 90 bbls. per day while drilling, and there has been no increase since 4,113 feet, the old total depth of hole.

Pecos Ordovician Test

Humble Oil & Refining Co.'s No. 1 White Baker, deep test, which is drilling in search of the Ordovician pay in Pecos County, continues to give the drilling crew trouble. It is now shut down at 4,521 feet in lime after the boiler blew up injuring several of the crew. This test has been a "jinks" since it started drilling, and has been a considerable expense to the company. It is in Section 44, Block 2, T.C.R.R. Survey.

Winkler Producer

Wahlenmaier Petroleum Corp.'s No. 1 Leck, a wildcat located in Section 3, Block 26, P.S.L. Survey, between the Leck area and the Hendrick Pool in Winkler County, appears to be a producer. A showing of gas was had at 2,920 feet and increases at 2,935 feet with a showing of oil and gas at 2,961 feet at which depth the hole filled 700 feet of oil in 36 hours and it is now coring at this depth.

Wentz Oil Co. has made an interesting location between the Leck Pool in north Winkler County and the Jal Pool in New Mexico, on the Daugherty-Leck lands in the NW cor., Section 3, Block C-23, P.S.L. Survey, Winkler County.

Big Lake Completion

Big Lake Oil Co. completed its No. 10-C University in the Big Lake Pool, Reagan County, the past week from pay topped at around 8,370 feet for an initial production of 1,254 bbls. per day flowing, total depth was 8,550 feet.

Four McMillan Locations

Four more locations have been announced for the McMillan Pool in Runnels County, by the Golden Petroleum Co. which will be offsets to R. C. Mann and others' Nos. 1, 3, 5 and 7 T. B. Wade in Subdivision 10, Norvell Travis Survey No. 533. Before any of these locations is drilled, the Golden Petroleum Co. will complete its No. 2 McMillan, in Subdivision 22, Norvell Travis Survey No. 533, which is a south offset to Mann and others' No. 1 Wade which proved a 1,600-foot extension to the field and has been producing 350 bbls. daily from a total depth of 2,534 feet.

RANGER AND NORTH TEXAS

A wildcat being drilled by H. H. Adams and others on their Erwin lease in the SE cor. Section 349, Denton County Survey, Callahan County, is showing for a producer. The test is estimated making 1,000,000 feet of gas from pay topped in sandy lime at 3,390-3,400 feet and is spraying some oil. The operators will set pipe and drill in.

During the past two weeks 100 wells have been treated with acid in the Ranger and Wichita Falls districts, and since these two districts have many wells that will come under the marginal well allowance there no doubt will be an increase in this practice.

The Wichita Falls district will not feel the 25 per cent reduction in allowable as much as other districts due to the fact that this district is already producing within 10,000 bbls. of its potential daily capacity.

In Wise County, the Danciger Oil & Refining Co. is rigging up for a wildcat test, 3 miles west of Chico in the Tarton Survey.

In Montague County, Seitz-Comegys & Seitz, Inc., and Continental Oil Co.'s No. 1 J. S. Holt, a wildcat which was opened by these operators several weeks ago, pumped 163 bbls. of oil during the first 24 hours, and 112 bbls. the second day from sand at 1,611-16 feet. Stanolind Pipe Line Co. is taking the oil.

Daily average crude oil movement from the Wichita Falls district for the week just ended was 51,899 bbls., an increase of 645 bbls. over the previous week. Daily average runs to stills for the week ending August 28 was 14,321 bbls. per day, an increase of 1,585 bbls. over the week before.

PANHANDLE DISTRICT

Field activities for this district were very quiet the past week, only three new locations being announced, and only one well being completed, all activity taking place in Gray County. The British American Oil Co. completed its No. 3 Phillips, in Section 127, Block 3, I.&G. N. Survey, for a 210-bbl. well after being shot with 90 quarts from 3,190-3,247 feet and bottomed at 3,270 feet.

Huber Petroleum Corp. is building a 55,000-bbl. tank on Section 33, Block Y, A.&B. Survey, in Hutchinson County, and is also extending its gas line to connect with more wells in this block and survey.

WEST TEXAS COMPLETIONS

Howard County

Continental Oil Co.'s No. 2 Overton (old well drilled deeper), increase in pay from 2,348-54 feet, treated with 1,000 gallons of acid, pumped 253 bbls. first 24 hours, total depth 2,437 feet. Sinclair Prairie Oil Co.'s No. 7 Dodge, top of pay 2,540-60 feet, initial production 45 bbls. per day, pumping, total depth 2,808 feet.

Pecos County

Kimberlin and others' No. 1 Gregg, top of pay 1,180 feet, initial production 35 bbls. per day, flowing by heads, total depth 1,448 feet.

Reagan County

Big Lake Oil Co.'s No. 10-C University, top of pay 8,370 feet (?), initial production 1,254 bbls. per day, flowing, total depth 8,550 feet; No. 11-C University, top of pay 8,532 feet, initial production 1,025 bbls. per day, total depth 8,800 feet. Continental Oil Co.'s No. 8-B University, total depth 8,695 feet, plugged back to 8,670 feet, initial production 500 bbls. flowing by gas lift, top of pay 8,625 feet.

Wildcat Operations in West Texas

Week Ending September 9

Company, well, farm name, section and block—	Remarks:
COKE COUNTY	
C. D. Hagerty et al's No. 1 Gaston, in Joseph Young Sur. No. 11	Drlg. 425 ft.
CONCHO COUNTY	
Mintex Oil Co.'s No. 2 Waring Estate, 660 ft. from N line, 150 feet from W line SW ¼ Sec. 2130, A. T. Robinson Sur.	Running 10-in. csg. 1,173 ft.
CRANE COUNTY	
Loffland Bros.' No. 1 Tubbs, 1,324 ft. from N line, 1,320 ft. from W line, Sec. 9, Blk. 27-B, P.S.L. Sur.	S.D. 2,450 ft.
ECTOR COUNTY	
Broderick & Calvert et al's No. 1 E. F. Cowden, 2,240 ft. from E line, 330 ft. from S line of Sec. 25, Blk. 44, Twp. 2s, T.&P. Sur.	Drlg. 3,480 ft.; elevation 3,033 ft.
Glipen et al's No. 1 B. H. Blakeney, 330 ft. from S and 440 ft. from E line of Sec. 33, Blk. 43, Twp. 1n, T.&P.R.R. Sur.	S.D. 350 ft. for water.
Landreth Production Co. & Llano Oil Co.'s No. 1 O. B. Holt, 660 ft. from S and W lines of N half of Sec. 30, P.S.L. Sur.	Drlg. 3,255 ft.
Moran's No. 1 R. W. Smith, NW cor. of Sec. 12, Blk. 43, Twp. 1n, T.&P.R.R. Sur.	S.D. T.D. 4,370 ft., 1,200 ft. of oil in hole, top pay 4,290-4,307 ft.
Stanolind Oil & Gas Co.'s No. 2 E. F. Cowden, 660 ft. from N and W lines of Sec. 26, Blk. 43, Twp. 2s, T.&P.R.R. Sur.	Drlg. 4,030 ft.
Stanolind O. & G. Co.'s No. 3 J. M. Cowden, 1,980 ft. from N and E lines, Sec. 34, Blk. 43, Twp. 1n, T.&P.R.R. Sur.	Reaming 4,013 ft.
Fred Turner's No. 1-B F. V. Addis, 440 ft. from the E line and 330 ft. from S line of Sec. 35, T.&P.R.R. Sur., Blk. 43, Twp. 2s	Cellar.
FISHER COUNTY	
Condor Pet. Co.'s No. 1 Holley, 1,170 ft. W and 660 ft. from N lines of E half, Sec. 6, Blk. R, W. E. Richardson Sur.	Moving in material.
Southern Oil Co.'s No. 1-A Pardue, 2,310 ft. from S and 990 ft. from E lines of Sec. 202, B.B.&C. Sur.	T.D. 2,350 ft.
HOWARD COUNTY	
Donnelly & Norman's No. 1 Magnolia Petroleum Co. (Bell), 330 ft. from N line and 330 ft. from W line of the N half of SW of Sec. 12, T.&P.R.R. Sur., Blk. 30, Twp. 1s	Drlg. 770 ft.
L. C. Harrison et al's No. 1 Texas Land & Mortgage Co., 2,310 ft. from E line and 330 ft. from the S line of Sec. 4, T.&P.R.R. Sur., Blk. 30, Twp. 1s	Location.
Joe Rusk et al's No. 2 G. M. Dodge Estate, 330 ft. from N line and 2,310 ft. from the E line of Sec. 9, H.&T.C.R.R. Sur., Blk. 30, Twp. 2s	Location.
IRION COUNTY	
R. D. Covington's No. 1 Mitchell, 150 ft. from S line and 150 ft. from W line of Sec. 734, C. Winsch Sur.	Location.
P. A. Johnson's No. 1 Townsite, Blk. 35, C. Schlote Sur., 150 ft. from S and W of Blk.	Drlg. 385 ft.
JONES COUNTY	
Dyer's No. 1 Odom, 200 ft. from S and 170 ft. from W of N 320 acres, G. Zumwalt Sur.	Drlg. 2,020 ft.
LOVING COUNTY	
R. L. Allen's No. 1 fee, 4,290 ft. from NE line, 330 ft. from SE line, Sec. 82, H.&T.C. Sur.	Location.

(Continued on Page 46)

ROCKY MOUNTAIN FIELDS

Daily average production estimates for the week ended September 9, 1933, are as follows:

	Bbls.
WYOMING	
Salt Creek	18,950
Big Muddy	1,760
Badger Basin	40
Byron-Garland	500
Byron-East	40
Dallas Derby	490
Dutton Creek	80
Elk Basin	540
Ferris	10
Frannie	210
Grass Creek	Shut in
Greybull	0
Hamilton Dome	860
Hudson	240
LaBarge	870
Lance Creek	210
Lost Soldier	1,790
Mule Creek	Shut in
Midway	60
Notches	Shut in
Oregon Basin	1,970
Osage	450
Pilot Butte	30
Rex Lake	Shut in
Rock River	1,200
South Casper	680
Poison Spider	70
Teapot	20
Warm Springs	Shut in
Total Wyoming	30,170
MONTANA	
Buckley-Border	390
Cat Creek	750
Cut Bank	920
Dry Creek	850
Kevin-Sunburst	3,660
Lake Basin	50
Pondera	920
Total Montana	7,570
COLORADO	
Florence	230
Fort Collins and Wellington	560
Iles Dome	550
Moffat	590
Orchard	120
Rangely	90
Tow Creek	240
Total Colorado	2,380
NEW MEXICO	
Artesia	590
Cooper area	70
Empire area	0
Eunice area	930
Getty Pool	0
Hobbs	33,530
Hogback	210
Hospah	Shut in
Jal	1,630
Lea area	2,180
Jackson	960
Maljamar	230
Rattlesnake	310
Table Mesa	80
Total New Mexico	40,720
Total all fields	80,840
Previous week	78,830
Difference	2,010

Pecos County

Kimberlin and others' No. 1 Gregg, top of pay 1,180 feet, initial production 35 bbls. per day, flowing by heads, total depth 1,448 feet.

Reagan County

Big Lake Oil Co.'s No. 10-C University, top of pay 8,370 feet (?), initial production 1,254 bbls. per day, flowing, total depth 8,550 feet; No. 11-C University, top of pay 8,532 feet, initial production 1,025 bbls. per day, total depth 8,800 feet. Continental Oil Co.'s No. 8-B University, total depth 8,695 feet, plugged back to 8,670 feet, initial production 500 bbls. flowing by gas lift, top of pay 8,625 feet.

ROCKY MOUNTAIN FIELDS

Daily average production estimates for the week ended September 9, 1933, are as follows:

JAMES McINTYRE, Editor
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L. G. E. BIGNELL, Petroleum Engineering Editor
DR. C. K. FRANCIS, Technical Editor
C. O. WILLSON, Refinery Editor
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This Business of

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TAIL FEATHERS aloft, gaunt legs braced to the breeze, head submerged in sand, stands the ostrich. The world may grin; but the ostrich takes it seriously. That's *his* definition of coverage.

The Oil and Gas Journal offers editorial coverage of the petroleum industry—but not the ostrich version. No pair of umbrellas ever kept a roofless dwelling dry. Nor can two or three editorial men provide competent coverage of the oil business in *any* publication.

The Journal has no delusions as to the quality and scope of coverage that satisfies its subscribers. Here's our definition: "At least one editorial man on duty at every oil center in the United States."

It's a fair definition. The subscriber who expects and pays for complete coverage is entitled to it. So the Journal provides it.

Note, above, the names of Journal editorial men located at Tulsa. They and their records comprise eight vital reasons why this publication is called "The Oil Man's Bible" in every corner of the industry.

Consider the editorial field representatives at the right. Name any oil sector, important or minor—you'll find it listed there. Geographically, and in the high caliber of its field men, the Journal's staff covers the industry perfectly. And not merely in two or three branches of the business; Journal coverage includes EVERY branch.

Yes, The Oil and Gas Journal takes its subscriber-obligation seriously. Coverage must be COVERAGE—not a mere sketchy suggestion of it. And the result of the Journal's sincerity hangs up this record:

> THE OIL AND GAS JOURNAL EMPLOYS A LARGER FULL-TIME EDITORIAL STAFF THAN ANY OTHER TRADE PERIODICAL (IN THE OIL INDUSTRY OR OTHER FIELD OF BUSINESS) IN THE ENTIRE WORLD.

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THE OIL AND GAS JOURNAL

Tulsa, Oklahoma

Reduction in East Texas Allowable Now Causes Feverish Search for Pipe Line Connections

By L. E. BREDBERG

DALLAS, Tex., Sept. 11.—Effective September 8, the Texas Railroad Commission ordered the East Texas daily allowable of about 618,000 bbls. per day cut 25 per cent in compliance with the Federal Government allocation plan. Federal investigators led by Chief A. D. Ryan are making it "tough" on small refineries which have been existing on "hot" oil supplied to them below the market price. These plants are obliged now by the Department of Interior to make out daily reports instead of monthly reports, which requires the refineries to show receipts of oil, the amount disposed of and its destination. A fine of $1,000 or six months imprisonment, or both, with each day constituting a separate offense, may be assessed against those who fail to comply with this order.

With this latest order, and the increase in the price of crude, the situation has changed in East Texas to the extent that most of these small plants which have been unable to obtain crude for processing, are now soliciting crude from the larger and major companies, offering to pay the market price plus gathering charges. Heretofore many of these plants have found it an easy matter to be supplied with "hot" oil below the market price, but this supply has been cut off and they now have to scratch for legally produced oil to keep their plants running.

Independents Seek Outlet

The cut in the allowable production is already having a large effect on the solicitations of pipe line connections. Independents and major purchasing companies which have been deprived of their normal requirements by the enforcement of the state-wide reduction are now working at a feverish pace, seeking connections to offset their losses which they have had to take by the 25 per cent reduction in per well allowable. A new pipe line rate of 22½ cents to the Gulf Coast was issued by the Railroad Commission September 5 to become effective December 1, 1933, a cut of 7½ cents from the current rate in the field.

J. M. Ross and others of Tyler have obtained special orders from Federal Judge Randolph Bryant to permit them to produce three flowing wells on the Findley-Thomas 6⅘-acre tract in the C. H. Alexander Survey, Gregg County, with a maximum of 200 bbls. daily per well until the proceeds from three-sixteenths of seven-eighths of the oil equals $2,500, which is a sum due Charles Pettit for a cash advance made to gain a settlement on litigation. These wells have been under receivership, operated by J. F. Lucey of Dallas. Federal judges have issued several of these orders to operators in the field.

J. A. Woods and others' of Dallas completed their No. 2 W. F. Smith for a small extension producer. The well is in the northwest corner of the J. M. Pineda Survey, Upshur County. Top of sand was 3,693-3,707 feet, and it was completed for an initial production of 60 bbls. flowing through open tubing.

Sun Oil Co.'s No. 9 A. G. Morton, on the extreme east edge of the Kilgore area, Gregg County, in the S. Baggett Survey, appears to be a failure after failing to show oil or gas from broken sand at 3,458-85 feet.

The extreme south end of the Joiner area in Rusk County continues to be extended with production. Most of the wells completed in this particular area were gas wells. Jordan and Ramsey's No. 1 L. W. Prior, in the Walker Pettit Survey, topped the Woodbine sand at 3,633-46 feet and tested a flow of gas with a spray of oil on a drill stem test from this depth. The operators have set cement above the sand and will try to complete as a producer. This will extend production over 1½ miles to the south should it be completed as an oil well. Murray Walker and others' No. 1 W. H. Arnold, in the Levi N. Sparks Survey, cored oil sand from 3,687-99 feet and is waiting on cement to set before drilling in. Total depth is 3,722 feet. This test will also extend production a short distance to the southeast, as it appears now to making a small producer. Joe Marr Drilling Co.'s No. 1 M. Lee in the J. H. Sparks Survey, in the gas area, made a flow of 50 bbls. of oil per hour on open tubing after it was deepened to 3,628 feet. The completion of this test marks a considerable extension to the field, and if these wells are completed as producers it will bear out the contentions of the Womack Oil Co. and others' application, recently submitted to the Railroad Commission, asking that this area be set aside as a separate field and not be prorated until its production had reached 10,000 bbls. per day. The Apex Pipe Line Co. has built a 3½-mile 4-inch line from the Carlisle community to take care of these wells.

Drilling activity took a jump the past week, presumably caused by the increase in price and the new order of the Railroad Commission that no wells are to be started without a hearing before the commission. Some 84 new locations were made and 76 completions reported for the week.

Daily average production for the week ending September 4 was 613,061 bbls., an increase of 3,581 bbls. over the previous week. Daily average distribution was 614,582 bbls., daily refinery runs averaged 55,027 bbls., while main pipe lines transported 557,940 bbls.

Commission Not Legally Obligated

Assistant Attorney General Maurice Cheek advised R. D. Parker of the Texas Railroad Commission that the commission is not legally obligated to grant back allowable production to any operator. Mr. Cheek made the following statement:

"The Railroad Commission in its discretion has chosen in certain instances to grant claims for back allowable where the operator was unable to produce on account of conditions beyond his control. Since back allowable is a matter of grace, however, and not a matter of right certainly the commission would have the right to take into consideration the fact that an applicant has in times past violated the commission's orders by overproducing his leases. Such an applicant, it seems to me, comes with rather poor grace to the commission for special dispensation."

This opinion will no doubt have serious influence on the issuance of further permits for the running of back allowable. The commission extended its order September 1 preventing the production of back allowable oil for another 30 days.

Wildcatting Activities

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 Long Lake Plantation which is probably the most watched wildcat that has been drilled in the State for some time, is now drilling below 5,130 feet in shale. This test is on a 25,000-acre block in the southwest part of Anderson County in the Simon Sanches Survey No. 11, close to the Trinity River. Many different opinions are available on whether the test is running high, some saying it is high and the others saying it is running normal. However, as it is being drilled in such virgin territory, it is very hard to correlate any logs with this one, as the nearest test drilled is about 15 miles away. Sand cores bearing traces of oil and gas saturation were reported recovered from about the 4,950-foot level. Considering that the drilling crews do not have any trouble, the outcome should be known this week.

Roeser and Pendleton's No. 1 Billett, in the Cecil Bobo Survey, Henderson County, is drilling below 3,605 feet in Austin chalk. In Leon County two interesting wells being drilled by the Shell Petroleum Corp. and the Ed W. Bateman Drilling Co. are still having trouble. Shell Petroleum Corp.'s No. 1 Beggs in the John Carter Survey has drill stem stuck after trying to drill around 10 joints of drill pipe lost in the hole. It is understood they might skid derrick and start a new hole. Ed W. Bateman Drilling Co.'s No. 1 A. C. Carlisle is still fishing for drill pipe at 5,969 feet in the northwest corner of the county in the Mary Elam Survey.

No new wildcat locations were reported for the district during the week.

East Central Texas Wildcats

Week Ending September 11

Company, well, farm name, section and block—	Remarks:
ANDERSON COUNTY	
Tide Water Oil Co. and Seaboard Oil Co.'s No. 1 Long Lake Plantation, 3,700 ft. due S of S cor. of Tom Reeves estate, 97-ac. tract, Simon Sanches Sur.	Coring 4,950 ft.
BOWIE COUNTY	
R. W. Lynn and W. R. Rolfe's No. 1 Mrs. R. D. Hart, 330 ft. out of NE cor. of Hart 20-ac. tract, 1 mile E of Nash, Thomas Price Sur.	Location.
Lee Timberlake et al's No. 2 Tidwell (old well to be drilled deeper), 2,310 ft. N and 665 ft. W of SE cor. of survey, L. M. Rice Sur.	Cleaning out 3,010 ft.
FRANKLIN COUNTY	
Van Emon et al's No. 1 O. S. Maxton, 910 varas W and 910 varas S of NE cor. of survey, John Brown Sur.	Derrick.
GREGG COUNTY	
Arcadia Refining Co.'s No. 1 R. M. Wood, 100 ft. W of Republic's No. 1 Wood in Blk. No. 134, H. R. Hokit Sur.	Rig up.
Atlantic Oil Producing Co.'s No. 11 Andrews, 330 ft. from N and E lines of lease, William Hyde Sur.	Location.
Atlantic Oil Producing Co.'s No. 9 R. E. Whaley, 2,910 ft. from N line and 3,510 ft. from E line of survey, W. P. Chisum Sur.	Drlg. 3,519 ft.
Atlantic Oil Producing Co.'s No. 5 Barton, 1,630 ft. from N line and 4,950 ft. from W line of survey, D. Sanches Sur.	Location.
Atlantic Oil Producing Co.'s No. 3 Foster, 780 ft. from N line and 160 ft. from E line of survey, W. G. Painter Sur.	Location.
Day and Armstrong's No. 2 E. L. Walker, 300 ft. from N line and 2,300 ft. from E line of survey, M. Dillard Sur.	Derrick.
East Texas Refining Co.'s No. 3 D. G. Sparks, 320 ft. from W line of lease and 660 ft. SE of No. 1, H. Kirk Sur.	Swabbing; T.D. 3,676 ft.
East Texas Refining Co.'s No. 9 Hindman and Guy, 5,570 ft. from S line and 3,870 ft. from W line of survey, G. W. Hooper Sur.	Waiting on cmt. to set 3,650 ft.
Lonnie Glasscock's No. 1 Whately, 1,100 ft. from S line and 200 ft. from W line of survey, William Robinson Sur.	Rig up.
Leckner and Hubbard's No. 2 Doby, 4,400 ft. from N line and 4,320 ft. from E line of survey, W. H. Castleberry Sur.	Rig up.
Payne et al's No. 1 Swain Holcomb, 1,980 ft. from S line and 1,170 ft. from W line of survey, E. R. Hokit Sur.	Set 7-in. csg.; waiting on cmt.
Rhoads Drilling Co.'s No. 5 Sabine River (Tract No. 4), 3,490 ft. from W and 510 ft. S of NW cor. of W. C. Alvice Sur.	Tested dry 3,555 ft.; T.D. 3,614 ft.
Sabine Oil Co.'s No. 3-A Falvey, 330 ft. from N and E lines of 28.7-ac. lease, M. Mann Sur.	Waiting on cmt. 3,668 ft.; T.D. 3,723 ft.
A. L. Slaughter's No. 1 R. B. White, 480 ft. from N line and 30 ft. from E line of survey, C. H. Alexandria Sur.	Chalk 2,700 ft.

(Continued on Page 44)

EAST TEXAS COMPLETIONS

North Gregg County

Atlantic Oil Producing Co.'s No. 45 Judge, top sand 3,505 feet, initial production 75 bbls. per hour through open tubing, total depth 3,534 feet; No. 44 Moore, top sand 3,537 feet, initial production 85 bbls. per hour through open tubing, total depth 3,548 feet; No. 10 Prichard, top sand 3,498 feet, initial production 80 bbls. per hour through open tubing, total depth 3,530 feet. Blake and Bradley's No. 1 Foshee Estate, top sand 3,549 feet, initial production 75 bbls. per hour through open tubing, total depth 3,568 feet. Cranfill and Reynolds' No. 8 Rembert, top sand 3,491 feet, initial production 75 bbls. per hour through open tubing, total depth 3,526 feet.

East Texas Oil & Refining Co.'s No. 9 Hindman and Guy, top sand 3,613 feet, initial production 68 bbls. in 30 minutes through open tubing, total depth 3,650 feet; No. 10 F. White, top sand 3,565 feet, initial production 64 bbls. in 30 minutes through open tubing, total depth 3,595 feet; No. 11 F. White, top sand 3,584 feet, initial production 64 bbls. in one hour through open tubing, total depth 3,600 feet. Fain & McGaha's No. 8 A. Tooke, top sand 3,636 feet, initial production 75 bbls. per hour through open tubing, total depth 3,656 feet. Gulf Production Co.'s No. 43 Judge, top sand 3,518 feet, initial production 80 bbls. per hour through open tubing, total depth 3,548 feet. Hawkeye Petroleum Co.'s No. 2 H. Bonner, top sand 3,605 feet, initial production 80 bbls. per hour through open tubing, total depth 3,615 feet. Humble Oil & Refining Co.'s No. 6 C. C. Clemens, top sand 3,619 feet, initial production 40 bbls.

per hour through three-quarters inch tubing choke, total depth 3,647 feet; No. 15 W. W. Holland, top sand 3,630 feet, initial production 18 bbls. in 15 minutes through open tubing, total depth 3,670 feet. Leckner and Hubbard's No. 3 Doby, top sand 3,465 feet, initial production 40 bbls. in 20 minutes through open tubing, total depth 3,491 feet.

Nicholson-Terrell Oil Corp.'s No. 2 Nicholson, top sand 3,598 feet, initial production 110 bbls. per hour through open tubing, total depth 3,625 feet. Roeser and Pendleton's No. 7-A Nicholson, top sand 3,654 feet, initial production 8 bbls. per day, pumping, total depth 3,676 feet. Shano Oil Co.'s No. 4 Hopkins, top sand 3,539 feet, initial production 75 bbls. per hour through open tubing, total depth 3,589 feet. Shasta Oil Co.'s No. 3-B G. W. Richey, top sand 3,552 feet, initial production 75 bbls. per hour through open tubing, total depth 3,580 feet. Staley and Winn's No. 2 T. Snoddy, top sand 3,594 feet, initial production 75 bbls. per hour through open tubing, total depth 3,645 feet.

Stanolind-Simms and Peachblossom's No. 6 J. W. Akin, top sand 3,525 feet, initial production 79 bbls. per hour through 2-inch open tubing, total depth 3,628 feet. Texas Co.'s No. 16 T. W. Lee, top sand 3,519 feet, initial production 95 bbls. per hour through open tubing, total depth 3,577 feet. Tide Water Oil Co.'s No. 6 Fisher, top sand 3,445 feet, initial production 11 bbls. in 10 minutes through open tubing, total depth 3,456 feet; No. 8 B. Moore, top sand 3,540 feet, initial production 12 bbls. in 10 minutes through open tubing, total depth 3,570 feet. Paul G. Brown's No. 3 G. W. Ritchie, top sand 3,555 feet, initial production 60 bbls. per hour through open tubing, total depth 3,580 feet.

Atlantic Oil Production Co.'s No. 48 Judge, top sand 3,502 feet, initial production 75 bbls. per hour through open tubing, total depth 3,534 feet; No. 49 Judge, top sand 3,502 feet, initial production 75 bbls. per hour through open tubing, total depth 3,535 feet. Atlantic and Sun companies' No. 6-B Barnswell, top sand 3,450 feet, initial production 75 bbls. per hour through open tubing, total depth 3,490 feet; No. 36 Hayes, top sand 3,491 feet, initial production 75 bbls. per hour through open tubing, total depth 3,536 feet. Bristow & Wynn's No. 5 Moore, top sand 3,530 feet, initial production 90 bbls. per hour through open tubing, total depth 3,540 feet. Joe Edgar's No. 2 Todd Stinchcomb, top sand 3,540 feet, initial production 75 bbls. through open tubing, total depth 3,586 feet. F. H. E. Oil Co.'s No. 2 Clements, top sand 3,558 feet, initial production 98 bbls. per hour through open tubing, total depth 3,595 feet. Foundation Oil Co.'s No. 4 L. Willis, top sand 3,623 feet, initial production 95 bbls. per hour through open tubing, total depth 3,640 feet. Goodwin and others' No. 3 Johnson, top sand 3,580 feet, initial production 75 bbls. per hour through open tubing, total depth 3,615 feet. Gregg Oil Co.'s No. 1-H T. P. Railroad, top sand 3,564 feet, initial production 75 bbls. per hour through open tubing, total depth 3,600 feet.

Gulf Production Co.'s No. 40 J. C. Judge, top sand 3,506 feet, initial production 70 bbls. per hour through open tubing, total depth 3,536 feet. Heyser & Heard's No. 7 Hindman & Guy, top sand 3,622 feet, initial production 90 bbls. per hour through open tubing, total depth 3,655 feet.

Ed Holman's No. 1 J. E. Turner, top sand 3,593 feet, initial production 75 bbls. per hour through open tubing, total depth 3,620 feet. Houston Oil Co.'s No. 4 E. W. Clements, top sand 3,556 feet, initial production 75 bbls. per hour through open tubing, total depth 3,576 feet. Kewanee Oil Co.'s No. 15 fee, top sand 3,567 feet, initial prdouction 20 bbls. in 15 minutes through open tubing, total depth 3,612 feet. Jewel Kimberlin and others' No. 1, Block No. 10, top sand 3,606 feet, initial production 70 bbls. per hour through open tubing, total depth 3,639 feet. Leckner and Hubbard's No. 2-A A. Harley, top sand 3,566 feet, initial production 85 bbls. per hour through open tubing, total depth 3,585 feet. sand 3,624 feet, initial production 75 bbls. per hour through open tubing, total depth 3,644 feet.

Magnolia Petroleum Co.'s No. 5 C. Jones, top sand 3,680 feet, initial production 84 bbls. per hour through open tubing, total depth 3,716 feet; No. 5 Nicholson, top sand 3,651 feet, initial production 75 bbls. per hour through open tubing, total depth 3,695 feet; No. 11 O. F. Smith, top sand 3,575 feet, initial production 80 bbls. per hour through open tubing, total depth 3,602 feet. New Process Oil Co.'s No. 5 George Anderson, top sand 3,484 feet, initial production 70 bbls. per hour through open tubing, total depth 3,526 feet. W. L. Pickens, receiver's No. 3 Hoyt, top sand 3,547 feet, initial production 90 bbls. per hour through open tubing, total depth 3,580 feet. Roeser & Pendleton's No. 7-A Satterwhite heirs, top sand 3,672 feet, initial production 60 bbls. per hour through open tubing, total depth 3,694 feet.

Rowan & Nichols' No. 4-A Todd, top sand 3,547 feet, initial production 75 bbls. per hour through open tubing, total depth 3,607 feet. Selby Oil & Gas Co.'s No. 19-B Snavely heirs, top sand 3,560 feet, initial production 72 bbls. in 30 minutes through open 2-inch tubing, total depth 3,585 feet. Snowden & McSweeney's No. 4 M. Bonner, top sand 3,580 feet, initial production 75 bbls. per hour through open tubing, total depth 3,590 feet. Sun Oil Co.'s No. 12 J. W. Akin, top sand 3,490 feet, initial production 20 bbls. in 15 minutes through open tubing, total depth 3,569 feet. Tide Water Oil Co.'s No. 10-A J. Nettleton, top sand 3,522 feet, initial production 13 bbls. in 10 minutes through open tubing, total depth 3,541 feet. A. D. Whiteman's (Shell) No. 1 W. L. Brawley, top sand 3,708 feet, initial production 75 bbls. per hour through open tubing, total depth 3,726 feet.

South Gregg County

Atlantic Oil Production Co.'s No. 11 Andrews, top sand 3,554 feet, initial production 85 bbls. per hour through open tubing, total depth 3,578 feet. Gulf Production Co.'s No. 23 Spear, top sand 3,596 feet, initial production 72 bbls. per hour through open tubing, total depth 3,614 feet. Island Oil Co.'s No. 2 W. Williams, top sand 3,572 feet, initial production 65 bbls. per hour through open tubing, total depth 3,590 feet. Rhoads Drilling Co.'s No. 12 Sabine River, top sand 3,556 feet, initial production 100 bbls. per one-half hour through open tubing, total depth 3,577 feet. Shell Petroleum Corp.'s No. 14-A B. F. Laird, top sand 3,525 feet, initial production 23 bbls. in 30 minutes through tapered tubing, total depth 3,557 feet. R. B. Shults' No. 1 M. Simmons, top sand 3,589 feet, initial production 80 bbls. per hour through open tubing, total depth 3,611 feet.

Sinclair Prairie Oil Co.'s No. 37 M. T. Cole, top sand 3,585 feet, initial production 45 bbls. in 30 minutes through open tubing, total depth 3,589 feet; No. 31-B A. A. King, top sand 3,439 feet, initial production 30 bbls. in 15 minutes through open tubing, total depth 3,483 feet; No. 4 A. A. King, top sand 3,440 feet, initial production 30 bbls. in 15 minutes through open tubing, total depth 3,485 feet. J. B. Sowell's No. 5 W. P. Luce, top sand 3,562 feet, initial production 60 bbls. per hour through open tubing, total depth 3,566 feet. S. K. Vierson and others' No. 6 G. E. Muckelroy, top sand 3,532 feet, initial production 120 bbls. per hour through open tubing, total depth 3,555 feet. Vise and others' No. C-1 Cumi Wells, top sand 3,694 feet, initial production 62 bbls. in 30 minutes through open tubing, total depth 3,696 feet. Wolf and Marine Production Co.'s No. 4 M. T. Cole, top sand 3,533 feet, initial production 110 bbls. per hour through open tubing, total depth 3,539 feet.

Atlantic Oil Production Co.'s No. 9 R. E. Whaley, top sand 3,625 feet, initial production 30 bbls. in 15 minutes through open tubing, total depth 3,638 feet. W. S. Randall, receiver's No. 1 Sam Williams, top sand 3,622 feet, initial production 75 bbls. per hour through open tubing, total depth 3,634 feet. W. S. Randall, receiver's No. 1 Wash Williams, top sand 3,562 feet, initial production 80 bbls. per hour through open tubing, total depth 3,574 feet. Hiram Reed and others' No. 2 Rodger Lacy, top sand 3,553 feet, initial production 95 bbls. per hour through open tubing, total depth 3,589 feet. Rhoads Drilling Co.'s No. 6 Sabine River, top sand 3,452 feet, initial production 30 bbls. in 30 minutes through open tubing, total depth 3,480 feet.

Sinclair Prairie Oil Co.'s No. 36 M. T. Cole, top sand 3,601 feet, initial production 25 bbls. in 15 minutes through open tubing, total depth 3,608 feet. Sun Oil Co.'s No. 8 Joe Rollin, top sand 3,620 feet, initial production 51 bbls. per hour through open tubing, total depth 3,650 feet. Texas Co.'s No. 4 Radford, top sand 3,664 feet, initial production 62 bbls. per hour through open tubing, total depth 3,667 feet.

Tide Water Oil Co.'s No. 10 M. H. Bivens, top sand 3,644 feet, initial production 17 bbls. in 10 minutes through open tubing, total depth 3,653 feet; No. 18 M. H. Bivens, top sand 3,627 feet, initial production 7 bbls. in five minutes through open tubing, total depth 3,635 feet; No. 21 M. B. Hughey, top sand 3,485 feet, initial production 13 bbls. in 10 minutes through open tubing, total depth 3,502 feet; No. 22 M. B. Hughey, top sand 3,484 feet, initial production 13 bbls. in 10 minutes through open tubing, total depth 3,502 feet. Utex Oil Co.'s No. 4 M. T. Cole, top sand 3,537 feet, initial production 75 bbls. per hour through open tubing, total depth 3,554 feet. Wheelock & Collins' No. 7 Clayton heirs, top sand 3,522 feet, initial production 68 bbls. per hour through open tubing, total depth 3,538 feet.

North Rusk County

Ajo Oil Co.'s No. 6 S. E. Sanders, top sand 3,722 feet, initial production 75 bbls. per hour through open tubing, total depth 3,754 feet. Barnsdall Oil Co.'s No. 5 T. H. Gill, top sand 3,653 feet, initial production 80 bbls. per hour through open tubing, total depth 3,660 feet. East Texas Oil & Refining Co.'s No. 5 West Andy Givens, top sand 3,663 feet, initial production 87 bbls. in 45 minutes through open tubing, total depth 3,683 feet; No. 10 D. Wills, top sand 3,644 feet, initial production 25 bbls. in 15 minutes through open tubing, total depth 3,650½ feet. Humble Oil & Refining Co.'s No. B-6 W. P. Moore, top sand 3,694 feet, initial production 75 bbls. per hour through open tubing, total depth 3,726 feet. P. & A. Oil Co.'s No. 1 Brightwell, top sand 3,665 feet, initial production 80 bbls. per hour through open tubing, total depth 3,680 feet. C. L. McMahon's No. 7 S. S. Laird, top sand 3,616 feet, initial production 86 bbls. per hour through open tubing, total depth 3,636 feet. J. M. Robert's No. 3 W. J. Brightwell, top sand 3,642 feet, initial production 40 bbls. in 20 minutes through open tubing, total depth 3,682 feet.

Shell Petroleum Corp.'s No. 13 W. P. Moore, top sand 3,686 feet, initial production 28 bbls. in 30 minutes through tapered tubing, total depth 3,698 feet. Snowden & McSweeney's No. 12 Roy Laird, top sand 3,574 feet, initial production 78 bbls. in 30 minutes through open tubing, total depth 3,598 feet. Stanolind Oil & Gas Co.'s No. 6 J. S. Powers, top sand 3,718½ feet, initial production 53 bbls in 30 minutes through 1-inch tubing choke, total depth 3,722½ feet. Tide Water Oil Co.'s No. 3-B Buntyn, top sand 3,614 feet, initial production 27 bbls. in 15 minutes through open tubing, total depth 3,637 feet.

Abercrombie & Harrison's No. 1-B Brightwell, top sand 3,604 feet, initial production 85 bbls. per hour through open tubing, total depth 3,629 feet. Gillman Oil Co.'s No. 3 Brightwell, top sand 3,610 feet, initial production 75 bbls. per hour through open tubing, total depth 3,620 feet. Houston Oil Co.'s No. 6 S. S. Laird, top sand 3,613 feet, initial production 35 bbls. in 30 minutes through open tubing, total depth 3,664 feet. Humble Oil & Refining Co.'s No. 70 L. D. Crim, top sand 3,609 feet, ini-

Estimated Crude Stocks in Gulf Coast 20,891,129 Barrels on August 1

HOUSTON, Tex., Sept. 11.—Estimated crude oil stocks in the Gulf Coast district as of August 1, 1933, totaled 20,891,129 bbls. This amounts to an increase of 1,714,220 bbls. over the July 1 totals. According to the estimates the largest increase in the stocks of crude oil was at the terminals and refineries in the Gulf Coast district. The stocks of crude oil located in the fields also show an increase which amounted to 540,700 bbls. in August, over July. The storage in the Louisiana Gulf Coast fields shows a decline in August from July. Storage in the Southwest district of the Gulf Coast area shows an increase of about 200,000 bbls. in August, over July.

The amount of storage capacity in the Gulf Coast district including that at the refineries which is used for both crude and refined products, totals approximately 70,000,000 bbls. A survey of the amount of oil now in storage reveals that about 50,000,000 bbls. of capacity is available in the Gulf Coast area alone. Under the new code this crude oil in storage is not available for the next 90 days.

GULF COAST STORAGE AT TERMINALS AND REFINERIES

	Bbls.
Almeda	104,921
Baytown	2,013,600
East Houston	1,487,600
Houston Works	735,701
Lynchburg	43,300
Norsworthy	218,635
Webster	1,651,000
Miscellaneous	5,242,284
Total	11,497,091

GULF COAST TEXAS STORAGE

Barbers Hill	92,000
Big Creek	40,046
Damon Mound	24,500
Goose Creek	32,900
Hull	310,480
Humble	774,873
Markham	11,044
Pierce Junction	48,262
Saratoga	15,274
Sour Lake	1,806,873
Sugarland	68,503
West Columbia	791,603
Refugio	155,684
Raccoon Bend	54,082
Total	4,226,124

GULF COAST LOUISIANA STORAGE

Anse La Butte	2,110
Black Bayou	6,245
Bayou Choctaw	1,250
Bayou Long	2,556
Cameron Meadows	1,410
Edgerly	8,020
Gueydan	4,075
Hackberry	6,110
Iowa	16,405
Jennings	29,110
Lake Barre	3,745
Lake Pelto	548
Leesville	2,270
Lockport	353,810
Port Barre	8,982
Sorrento	3,848
Starks	7,895
Sulphur Mines	160,810
Vinton	225,110
Welsh	13,738
Whitecastle	3,205
Total	861,352
Grand total Gulf Coast	5,087,476

SOUTHWEST TEXAS

Chapman	188,648
Darst Creek	189,550
Laredo	1,597,760
Lytton Springs	7,650
Salt Flat	2,290,015
Yoast	1,300
Hilbig-Bastrop County	18,229
Pettus-Tuleta	13,410
Total	4,306,562
Grand total all areas	20,891,129

tial production 97 bbls. per hour through three-quarters inch tubing choke, total depth 3,623 feet, Magnolia Petroleum Co.'s No. 11 C. C. Still, top sand 3,631 feet, initial production 105 bbls. per hour through open tubing, total depth 3,653 feet. Shoreline Oil Co.'s No. 2 Brightwell, top sand 3,630 feet, initial production 60 bbls. per hour through open tubing, total depth 3,645 feet. Sam Skler's No. 2 C. E. Christian, top sand 3,641 feet, initial production 80 bbls. per hour through open tubing, total depth 3,650 feet. Tide Water Oil Co.'s No. 4 Jernigan, top sand 3,674 feet, initial production 27 bbls. in 15 minutes through open tubing, total depth 3,690 feet. Weaver and Crim Oil Co.'s No. 3-B Bean, top sand 3,610 feet, initial production 40 bbls. per hour through open tubing, total depth 3,703 feet.

South Rusk County

American Liberty Oil Co.'s No. 8-A L. J. Pinkston, top sand 3,643 feet, initial production 75 bbls. per hour through open tubing, total depth 3,681 feet. Cullen Oil Co.'s No. 3-B Thrash, top sand 3,660 feet, initial production 55 bbls. per hour through open tubing, total depth 3,725 feet. East Shore Oil Co.'s No. 6 Fox, top sand 3,690 feet, initial production 25 bbls. in 15 minutes through open tubing, total depth 3,704 feet. East Texas Oil & Refining Co.'s No. 5 Giles, top sand 3,673 feet, initial production 20 bbls. in 15 minutes through open tubing, total depth 3,725 feet. Everett Drilling Co.'s No. 5-A Cole, location abandoned September 2. Griffin & Barnes' No. 1 fee, top sand 3,647 feet, initial production 25 bbls. per hour through open tubing, now dead, total depth 3,700 feet. H. B. W. Oil Co.'s No. 3 Redwine, top sand 3,508 feet, initial production 75 bbls. per day pumping, total depth 3,610 feet.

Humble Oil & Refining Co.'s No. 20 Blackwell, top sand 3,651 feet, initial production 75 bbls. per hour through open tubing, total depth 3,677 feet; No. 9-B Kangerga, top sand 3,629 feet, initial production 75 bbls. per hour through open tubing, total depth 3,649 feet; No. 10 Pilgreen, top sand 3,667 feet, initial production 75 bbls. per hour through open tubing, total depth 3,766 feet; No. 35-A R. E. L. Silvey, top sand 3,625 feet, initial production 75 bbls. per hour through open tubing, total depth 3,685 feet; No. 8-A V. Turner, top sand 3,710 feet, initial production 75 bbls. per hour through open tubing, total depth 3,778 feet.

H. L. Hunt Production Co.'s No. 11-C R. W. Fair, top sand 3,648 feet, initial production 75 bbls. per hour through open tubing, total depth 3,665 feet. J. E. Mabee's No. 4 S. Stone, top sand 3,636 feet, initial production 75 bbls. per hour through open tubing, total depth 3,650 feet. Joe Marr Drilling Co.'s No. 1 M. Lee, top sand 3,608 feet, initial production 50 bbls. per hour through open tubing, total depth 3,628 feet. M. Barney Cockburn's No. 2 A. Thrash, top sand 3,687 feet, initial production 75 bbls. per hour through open tubing, total depth 3,745 feet. Mid-Kansas Oil & Gas Co.'s No. 50 M. M. Cross, top sand 3,615 feet, initial production 88 bbls. per hour through open tubing, total depth 3,631 feet; No. 44 W. T. Grissom, top sand 3,636 feet, initial production 90 bbls. per hour through open tubing, total depth 3,655 feet; No. 2 Robert Van Zandt, top sand 3,652 feet, initial production 85 bbls. per hour through 2-inch lead line, total depth 3,657 feet. Olsen Brothers' No. 5 J. T. Brown, top sand 3,680 feet, initial production 75 bbls. per hour through open tubing, total depth 3,740 feet.

Sun Oil Co.'s No. 3 Cooper, top sand 3,639 feet, initial production 44 bbls. per hour through open tubing, total depth 3,660 feet. Sutton & Hawkins' No. 1 Church Lot, top sand 3,610 feet, initial production 50 bbls. per hour through open tubing, total depth 3,709 feet. Tide Water Oil Co.'s No. 12 L. J. Pinkston, top sand 3,762 feet, initial production 65 bbls. per hour through open tubing, total depth 3,791 feet; No. 6 Ras Pool, top sand 3,695 feet, initial production 13 bbls. in 15 minutes through open tubing, total depth 3,742 feet.

C. L. Archer's No. 3 J. H. Stewart, top sand 3,717 feet, initial production 80 bbls. per hour through open tubing, total depth 3,722 feet. Como Oil Co.'s No. 2 Daisy Bradford, top sand 3,640 feet, initial production 45 bbls. per hour through open tubing, total depth 3,670 feet. Humble Oil & Refining Co.'s No. 30-A R. E. L. Silvey, top sand 3,655 feet, initial production 59 bbls. per hour through three-quarters inch tubing choke, total depth 3,727 feet; No. 34-A R. E. L. Silvey, top sand 3,634 feet, initial production 64 bbls. per hour through three-quarters inch tubing choke, total depth 3,734 feet. Sinclair Prairie Oil Co.'s No. 39 I. L. Kinney, top sand 3,675 feet, initial production 35 bbls. in 15 minutes through open tubing, total depth 3,687 feet.

Texas Co.'s No. 10 Bank of Overton, top sand 3,722 feet, initial production 80 bbls. per hour through open tubing, total depth 3,755 feet; No. 3 Cora Hanna, top sand 3,614 feet, initial production 65 bbls. per hour through open tubing, total depth 3,639 feet. Venable & McClanahan's No. 13 J. A. Birdwell, top sand 3,598 feet, initial production 37 bbls. in 15 minutes through open tubing, total depth 3,630 feet.

Smith County

Mid-Kansas Oil & Gas Co.'s No. 21 J. H. Sharp, top sand 3,693 feet, initial production 28 bbls. per hour through open tubing, total depth 3,695 feet.

Hunt Production Co.'s No. 7-B R. W. Fair, top sand 3,716 feet, initial production 75 bbls. per hour through open tubing, total depth 3,719 feet. Jackson-Wise & Snowden's No. 4 S. S. Cooke, top sand 3,760 feet, initial production 65 bbls. per hour through open tubing, total depth 3,760 feet. Sinclair Prairie Oil Co.'s No. 9-B A. S. Jarvis, top sand 3,672 feet, initial production 35 bbls. in 15 minutes through open tubing, total depth 3,681 feet. Sutton & Hawkins' No. 3 Cemetery, top sand 3,838 feet, initial production 75 bbls. per hour through open tubing, total depth 3,839½ feet.

Upshur County

Humble Oil & Refining Co.'s No. 7-B Eva O'Byrne, top sand 3,609 feet, initial production 5 bbls. in 15 minutes through open tubing, total depth 3,695 feet; No. 7 J. Phillips, top sand 3,668 feet, initial production 50 bbls. per hour through open tubing, total depth 3,704 feet. Paul Pewitt's No. 2 A. J. Sanders, top sand 3,613 feet, initial production 80 bbls. per hour through open tubing, total depth 3,630 feet.

Mudge Oil Co.'s No. 7-A A. Richardson, top sand 3,656 feet, initial production 75 bbls. per hour through open tubing, total depth 3,705 feet. J. A. Wood and others' No. 1 W. F. Smith, top sand 3,693 feet, initial production 60 bbls. per hour through open tubing, total depth 3,707 feet.

WILDCAT COMPLETIONS

Hopkins County

Culberson & Lynch's No. 1 Louis Stribling, location abandoned, Thomas Norris Survey.

Van Zandt County

Reasonover and others' No. 1 D. F. Cade, top sand 1,177 feet, base of sand 1,212 feet, dry and abandoned, elevation 474 feet, total depth 1,257 feet. Van Oil Association's No. 1 Tankersley, elevation 457 feet, top Pecan Gap 2,590 feet, base Pecan Gap 2,810 feet, dry and abandoned, total depth 3,010 feet.

VETERANS RETIRE

OIL CITY, Pa., Sept. 9.—Two veteran employes of the United Natural Gas Co., whose service to the gas industry totals 80 years, retired under the pension plan of the company effective September 1. The retiring veterans are Herbert R. Sheldon, assistant treasurer of the United Natural Gas Co. and affiliated companies, and Frank C. Wardwell, clerk in the accounting department.

East Central Texas Wildcats

(Continued from Page 42)

Sun Oil Co.'s No. 9 A. S. Morton, 330 ft. from N and W lines of lease, S. Baggett Sur. ..... Waiting on cmt.; swabbing; T.D. 3,485 ft.

Sun Oil Co.'s No. 5 J. T. Elder, 330 ft. from W line of lease and 660 ft. S of No. 4, John Wilkerson Sur. ..... Derrick.

A. W. Tarrant's No. 2 Sabine River, Tract No. 1, 430 ft. W and 540 ft. N of SE cor. of M. Dillard Sur. ..... Derrick foundation.

Tide Water Oil Co.'s No. 9 M. B. Hughey, 914 ft. from N line and 1,173 ft. from E line of lease, J. Hillard Sur. ..... Coring; 6⅝-in.; T.D. 3,454 ft.

HENDERSON COUNTY

Campbell and Champlin's No. 1 R. S. Ansley, 108 varas S and 628 varas W of NE cor. of lease, 6 miles SE of Buffalo, N. H. Thompson Sur. ..... Derrick.

Laco Oil Co.'s No. 1 John Martin, 400 ft. from N line and 350 ft. from E line of 109-ac. tract, Robert C. Morris Sur. ..... T.D. 4,520 ft.; shale.

McElreath and Suggett et al's No. 1 Ferguson, 330 ft. out of most southerly NW cor. of 252.8-ac. tract, William P. Wyche Sur. ..... Plugged back to 4,317 ft.; drill stem test 1,500-2,700 ft. salt water in 15 min.; drill stem test 4,215-4,300 ft. salt water in 19 min.

Roeser & Pendleton's No. 1 L. R. Billett, 330 ft. from N line and 2,310 ft. from E line of survey, Cecil Bobs Sur. ..... Set 10-in. csg. 104 ft.; shale 560 ft.

HOPKINS COUNTY

Culberson & Lynch's No. 1 Louis Stribling, 150 ft. from NW cor. of tract and lease, Thomas Norris Sur. .... Rig up.

KAUFMAN COUNTY

I. W. Lewis et al's No. 1 David Clark, 2,305 ft. from S line and 1,052 ft. from E line of 320-ac. tract and survey, S. Edens Sur. ..... Shale 200 ft.

J. M. Scott et al's No. 2 Pannill, 3,550 ft. from NE line and 5,090 ft. S of Texas Midland Railroad, A. Charins Sur. ..... Washing to bottom; T.D. 2,905 ft.

LEON COUNTY

Bateman et al's No. 1 A. C. Carlyle, 150 ft. out of NE cor. of survey, Mary Elem Sur. ..... Made drill stem test from 5,945-5§ ft.; tested 15 ft. mud in 15 min.; now fishing for drill stem.

Shell Petroleum Corp.'s No. 1 Beggs, center of 123.8-ac. tract, John Carter Sur. ..... Set whipstock 5,247 ft.; drlg. 5,277 ft.; chalk.

LIMESTONE COUNTY

C. C. Curtis et al's No. 1 Emma Daniels, 150 ft. from W line and 150 ft. from S line of 42.5-ac. tract in Pedro Varela Sur. ..... Drlg. shale 1,600 ft.

F. A. Sewciser et al's No. 1 fee, 3,000 ft. from S line and 600 ft. from W line of 115-ac. tract, north part of county, A. Vincent Sur. ..... Drlg. shale 650 ft.

RUSK COUNTY

East Texas Refining Co.'s No. 10 D. Wills, 40 ft. W and 366 ft. S of SE cor. of Stanolind Beall lease, W. P. Chisum Sur. ..... Lost hole; Skidded 50 ft. W.

East Texas Refining Co.'s No. 4 Giles, 2,450 ft. from N line and 1,550 ft. from E line of survey, M. J. Pru Sur. ..... T.D. 1,030 ft.; shale.

East Texas Refining Co.'s No. 6 C. H. Grissom, 5,810 ft. from S line and 3,300 ft. from W line of survey, F. Cordova Sur. ..... Location.

Farrell Drilling Co.'s No. 2 W. M. Hammett, 330 ft. out of most northerly NW cor. of survey, Walker Pettit Sur. ..... Moving in.

Jordan & Ramsey's No. 1 L. W. Prior, 330 ft. from N line and 607 ft. from E line of 53-ac. lease, Walker Pettit Sur. ..... Drill stem test 3,633-46 ft.; est. 20,000,000 ft. gas; T.D. 3,646 ft.

Joe Marr Drilling Co.'s No. 1 M. Lee, 459 ft. S and 330 ft. W of SW cor. of Stanolind's 100-ac. Lacy tract, J. H. Sparks Sur. ..... Waiting on cmt.

Walker Murray et al's No. 1 W. H. Arnold, 330 ft. from S and W lines of 50-ac. tract, Levi N. Sparks Sur. ..... Oil sand 3,687-99 ft.; T.D. 3,722 ft.

O'Hearn Oil Co.'s No. 4 M. M. McMillan, 1,980 ft. from N line and 1,990 ft. from W line of survey, T. J. Martin Sur. ..... Rig up.

P. & A. Oil Co.'s No. 2 Brightwell, 700 ft. from N line and 1,320 ft. from E line of survey, R. W. Smith Sur. ..... Rig up.

Patterson Drlg. Co.'s No. 3 Brock Estate, 2,320 ft. from N line and 100 ft. from E line of survey, R. W. Smith Sur. ..... Derrick.

Sinclair Prairie Oil Co.'s No. 39 Kinney, 4,120 ft. from N line and 330 ft. from W line of survey, J. B. De Cadena Sur. ..... T.D. 2,930 ft.

Tatums et al's No. 1 Brightwell, 150 ft. from N line and 1,350 ft. from E line of survey, R. W. Smith Sur. ..... Drlg. 2,330 ft.

Texas Co.'s No. 5 J. W. Turner, 955 ft. from S line and 330 ft. from W line of lease and survey, J. M. Scott Sur. ..... Rig up.

Texas Co.'s No. 6 J. W. Turner, 955 ft. from S line, 1,270 ft. from W line of survey, J. M. Scott Sur. .... Rig up.

Tide Water Oil Co.'s No. 9 J. S. Bean, 330 ft. from W line and 880 ft. from E line of lease, J. Lewis Sur. ..... Testing 3,610 ft.

SMITH COUNTY

Arcadia Refining Co.'s No. 1 T. O. Wright, 700 ft. from N line and 1,320 ft. from E line of survey, Juan Vargas Sur. ..... Drlg. 2,380 ft.

Long Drilling Co.'s No. 3 G. A. Turner, D. W. Campbell Sur. ..... Derrick.

Alex McCutcheon's No. 3 A. S. Jarvis, 3,300 ft. from S line and 5,820 ft. from E line of survey, Juan Vargas Sur. ..... Waiting on cmt.; T.D. 3,650 ft.

Alex McCutcheon's No. 4 Stone, 890 ft. from N line and 960 ft. from W line of survey, D. Shaw Sur. .... Derrick.

UPSHUR COUNTY

Cranfill & Reynolds' No. 3 L. Graves, 330 ft. from N line and 990 ft. from E line of survey, M. Irwin Sur. ..... Derrick.

M. T. Flannagan's No. 1 H. F. Whitehurst, 1,650 ft. from N line and 330 ft. from E line of lease, McKinley and Williams Sur. ..... Shale 3,125 ft.

W. V. Greer's No. 1 A. B. Mackey, 2,409 ft. from N line and 1,080 ft. from E line of survey, H. Pineda Sur. ..... T.D. 3,733 ft.

Magnolia Petroleum Co.'s No. 1 C. Brooks, 345 ft. from S line and 330 ft. from E line of 50-ac. lease, J. F. Davidson Sur. ..... Chalk 2,955 ft.

Magnolia Petroleum Co.'s No. 2 C. Brooks, 330 ft. from S and W lines of 50-ac. tract, J. F. Davis Sur. .... Location.

B. F. Traywick et al's No. 1 M. Vaughn, 330 ft. from S line and 330 ft. from W line of 108-ac. tract, 3 miles NW of Big Sandy, P. B. Standifer Sur. ..... Location.

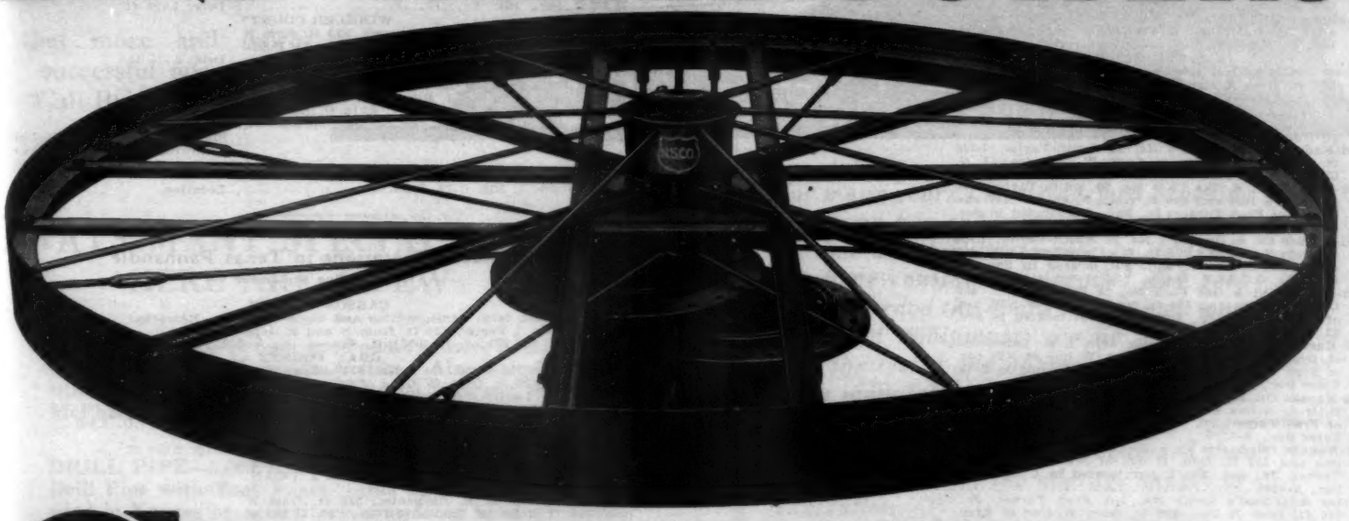
VAN ZANDT COUNTY

J. O. Griffin's No. 1 Bruce & Gibbard, 1,000 ft. from S line and 330 ft. from E line of 134-ac. tract, G. Martinez Sur. ..... Bldg. derrick.

L. C. Martin et al's No. 1 E. T. Rhodes, 150 ft. from E line and 150 ft. from S line of 34.3-ac. tract, William Page Sur. ..... T.D. 1,324 ft.; shale.

Pure Oil Co.'s No. 6 R. V. White, 330 ft. N of S line and 3,960 ft. W of E line of R. V. White 19.3-ac. tract, Mund Cross Sur. ..... Drlg. 1,756 ft.

NATIONAL
BAND WHEEL POWERS



12 C

Simple design, rugged construction and dependable lubrication are features that have made National Band Wheel Powers the standard for multiple pumping. Wherever installed, their long, continuous, trouble-free service, low maintenance cost and freedom from mechanical difficulties have been contributing factors in a complete, universal satisfaction.

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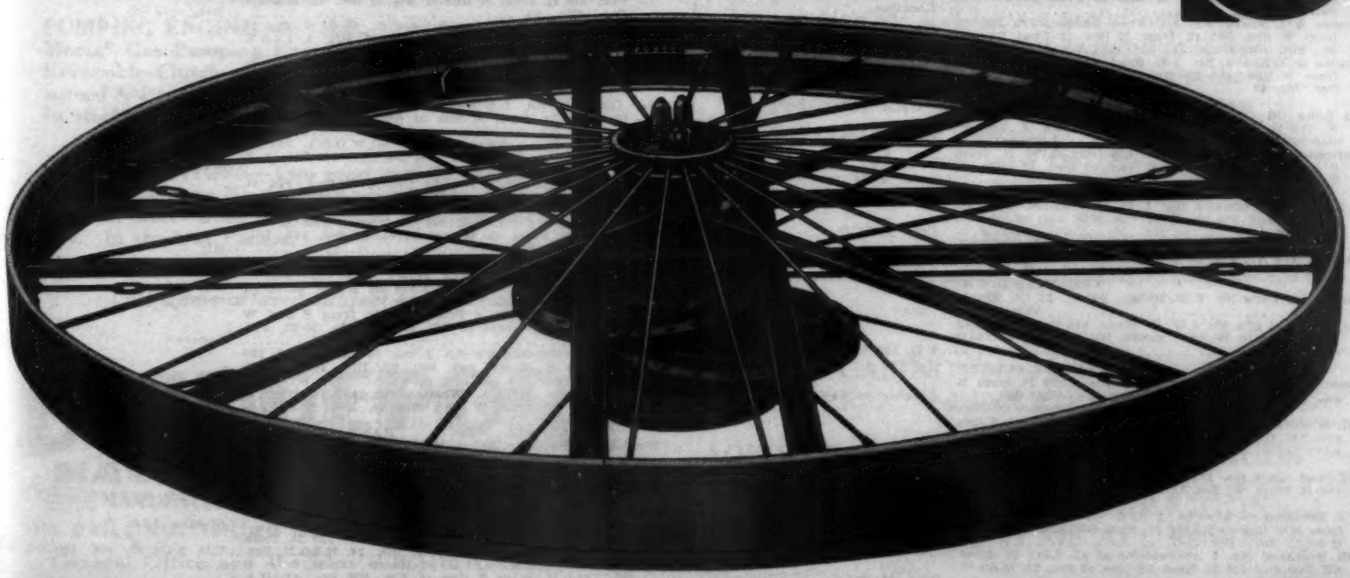

THE NATIONAL SUPPLY COMPANIES

Ray Drilling Co.'s No. 1 J. W. Mallory, 1,150 ft. from S line and 150 ft. from W line of 217-ac. tract. John Walling Sur. ..... Derrick.
Van Oil Association's No. 1 Tankersley, 300 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. ..... Drlg. 2,802 ft.

WOOD COUNTY

D. T. Cauble and Thompson's No. 1 N. G. Bobbett, 650 ft. from S line and 230 ft. from W line of tract, 2½ miles NW of Mineola, Daniel Fuller Sur. ..... T.D. 2,885 ft.; shale.

Wildcat Operations in West Texas

(Continued from Page 40)

R. L. Allen's No. 2 fee, 4,290 ft. from NE line, 990 ft. from SE line, Sec. 82, Blk. 33, H.&T.C. Sur. .... Location.
R. L. Allen's No. 3 fee, 4,290 ft. from NE line, 990 ft. from NW line, Sec. 82, Blk. 33, H.&T.C. Sur. .... Location.
R. L. Allen's No. 4 fee, 4,290 ft. from NE line, 330 ft. from NW line, Sec. 82, Blk. 33, H.&T.C. Sur. .... Location.
Eppenauer Drlg. Co.'s No. 1-C Allen, 330 ft. from NW line, 3,210 ft. from SW line, Sec. 90, Blk. 1, W.& NW Sur. ..... Location.
Eppenauer Drlg. Co.'s No. 1-A Victor, 330 ft. from SW and 338 ft. from SE of NW of N half Sec. 4, Blk. 2, W.&N.W. Sur. ..... Rigging up standard tools.

MITCHELL COUNTY

Neeley-Prater's No. 1 Morrison, 330 ft. from N line and 330 ft. from E line of Sec. 34, Blk. 29, T.&P.R.R. Sur. ..... Spudded and S.D.

PECOS COUNTY

Humble Oil & Refining Co.'s No. 1 White, Baker, 1,320 ft. from N and E lines of Sec. 44, Blk. Z, T.C. Sur.... S.D. 4,521 ft.
Mid-Kansas O. & G. Co.'s No. 18 Smith-Taylor, 1,296 ft. from S line, 1,300 ft. from W line, Sec. 33, G. C.&S.F. Sur., Blk. 194 ..... Location.
Mid-Kansas Oil & Gas Co.'s No. 20 Smith-Taylor, 700 ft. from S line and 330 ft. from W line of NW cor. S half of Fred Turner, Jr., Sur., but located in Sec. 33, Blk. 194, G.C.&S.F. Sur. ..... Running 10-in. csg. 1,010 ft.
Mid-Kansas Oil & Gas Co.'s No. 21 Smith-Taylor, 1,700 ft. from S line and 275 ft. W of northerly NW cor. of Fred Turner, Jr., Sur., but located in Sec. 33, Blk. 194, G.C.&S.F. Sur. ..... Drlg. 335 ft.
Mid-Kansas Oil & Gas Co.'s No. 22 Smith-Taylor, 250 ft. from S line and 324 ft. from W line of NW cor. of Fred Turner, Jr., Sur. No. 2, but located in Sec. 33, Blk. 194, G.C.&S.F. Sur. ..... Bldg. road.
Mid-Kansas Oil & Gas Co.'s No. 33-A I. G. Yates, 205 ft. from N line and 250 ft. from W line of NW cor. of Fred Turner, Jr., Sur. No. 3, but located in I. G. Yates Sur., A-8195 ..... Bldg. road.
Mid-Kansas Oil & Gas Co.'s No. 34-A I. G. Yates, 150 ft. from N line and 250 ft. from E line of NW cor. of Fred Turner, Jr., Sur. No. 4, but located in I. G. Yates Sur., A-8195. ..... Drlg. 640 ft.
Mid-Kansas Oil & Gas Co.'s No. 35-A, 250 ft. from N line and 324 ft. from E line of NW cor. of Fred Turner, Jr., Sur. No. 2, but located in I. G. Yates Sur., A-8195. ..... Bldg. road.
Sproles & O'Neal's (rec.) No. 2-A Fred Turner, Jr., 196 ft. from N line, 300 ft. from W line of Fred Turner, Jr., Sur. No. 1 ..... Location.
Sproles & O'Neal's (rec.) No. 4-A Fred Turner, Jr., 1,640 ft. from N line, 250 ft. from W line of Fred Turner, Jr., Sur. No. 1 ..... Running 12½-in. csg. 410 ft.
Sproles & O'Neal's (rec.) No. 5-A Fred Turner, Jr., 250 ft. from N, 250 ft. from W of C SE cor. of Fred Turner, Jr., Sur. No. 1 ..... Location.
Sproles & O'Neal's No. 6-A Fred Turner, Jr., 1,940 ft. from S line, 300 ft. from W line of Fred Turner Sur. No. 1 ..... Drlg. 1,015 ft.
Sproles & O'Neal's No. 7-A Fred Turner, 280 ft. from S line, 250 ft. from W line of Fred Turner, Jr., Sur. No. 1 ..... Location.
Sproles & O'Neal's No. 8-A Fred Turner, Jr., 560 ft. from S line, 550 ft. from E line of Fred Turner Jr., Sur. ..... Location.
Sproles & O'Neal's No. 1-B Fred Turner, Jr., 250 ft. from N line, 308 ft. from E line of Fred Turner, Jr., Sur. ..... Rigging up machine.
Sproles & O'Neal's No. 2-B Fred Turner, Jr., 250 ft. from N line, 305 ft. from W line of Fred Turner, Jr., Sur. ..... Cellar.
Sproles & O'Neal's No. 3-B Fred Turner, Jr., 356 ft. from S line, 250 ft. from W line of Fred Turner, Jr., Sur. ..... Location.
Sproles & O'Neal's No. 4-B Fred Turner, Jr., 717 ft. from S line, 250 ft. from E line of Fred Turner, Jr., Sur. No. 2 ..... Location.
Sproles & O'Neal's No. 1-C Fred Turner, 250 ft. from N line, 250 ft. from W line of Fred Turner, Jr., Sur. ..... Location.
Sproles & O'Neal's No. 2-C Fred Turner, Jr., 205 ft. from N line, 205 ft. from E line of Fred Turner, Jr., Sur. No. 3 ..... Location.
Sproles & O'Neal's No. 1-D Fred Turner, Jr., 150 ft. from N line, 250 ft. from W line of Fred Turner Sur. No. 41 ..... Fishing 370 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 12-C University, 928 ft. from N, 740 ft. from E line of Sec. 12, Blk. 2, University land ..... Drlg. 6,010 ft.
Continental Oil Co.'s No. 9-B University, 1,900 ft. from S line, 1,805 ft. W of E line of Sec. 39, Blk. 9, University Land Sur. ..... Drlg. 6,703 ft.; small show oil 6,482-92 ft.
G. R. Snider, Trustee's No. 1 D. E. Hughes, 1,243 ft. from E and 990 ft. S of the NW cor. of Sec. 9, G.C.&S.F. Sur. ..... Drlg. 2,550 ft.

REEVES COUNTY

Freels et al's No. 1 J. B. Greeman, 330 ft. from NE and 2,310 ft. from S line of Sec. 21, Blk. 2, H.&G.N. Sur... S.D. 1,675 ft.

RUNNELS COUNTY

Golden Pet. Co.'s No. 2 McMillan, Subdv. 33, N. Travis Sur. ..... Cellar.
B. C. Mann et al's No. 1 H. E. Wade, 150 ft. from S and 1,650 ft. from W line, Subdv. No. 8, Norvel Travis Sur. No. 533 ..... T.D. 135 ft.

TAYLOR COUNTY

Crissman et al's No. 1 City of Abilene, 1,300 ft. from N and 1,350 ft. from E lines of Sec. 46, Bal Sur. .... Rigging up cable tools.

TOM GREEN COUNTY

J. R. Midlock's No. 1 Frank Garlita, 150 ft. from S line and 840 ft. from E line of J. H. Mueller Sur. No. 2,201 ..... Location.

UPTON COUNTY

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W. Sec. 197, Blk. F, C.C.S.D.&R.G.N.G.... Drlg. 6,480 ft.

WARD COUNTY

Abell Brothers et al's No. 1 S. S. Owen et al, 330 ft. from NW line and 2,310 ft. from SW line of Sec. 16, H.&T.C. Sur., Blk. 5 ..... T.D. 788 ft.
Abell Brothers' No. 1 Archenhold et al, 1,310 ft. from NE line and 330 ft. from SE line of Sec. 23, H.&T.C. Sur., Blk. 5 ..... Drlg. 75 ft.
Atlantic Oil & Prod. Co.'s No. 3 W. D. Johnson, 1,650 ft. from NW line of the NE half of Sec. 9, H.&T.C. Sur., Blk. 24 ..... Drlg. 2,415 ft.; small shows oil 2,235-50 and 2,406 ft.
Atlantic Oil & Prod. Co.'s No. 4 W. D. Johnson, 330 ft. from NE line and 990 ft. from SE line of NE half of Sec. 9, H.&T.C. Sur., Blk. 24 ..... Rotary rig.
George Bentley et al's No. 1 C. Bergman, 330 ft. from NE line and 2,310 ft. from NW lines of Sec. 26, Blk. 5, H.&T.C. Sur. ..... T.D. 2,650 ft., plugged back to 2,470 ft., fishing.
George Bentley et al's No. 1 A. Emory, 1,330 ft. from NE line and 2,310 ft. from NW line of Sec. 24, Blk. 5, H.&T.C. Sur. ..... T.D. 2,301 ft.
Eppenauer Drlg. Co.'s No. 1 University, 330 ft. from N and 440 ft. from E of S half of Blk. 16 ..... Drlg. 2,563 ft.; small show oil from 2,545-56 ft.
Jack Leidecker et al's No. 1 A. Archenhold et al, 2,310 ft. from NE and 2,310 ft. from NW line of Sec. 23, H.&T.C.R.R. Sur., Blk. 5 ..... Drlg. 1,930 ft.
Sinclair Prairie Oil Co.'s No. 3 H. Archenhold, 330 ft. from NE lines and 330 ft. from SE lines of SW of Sec. 23, H.&T.C. Sur., Blk. 5 ..... Location.
S. A. Thompson et al's No. 4 W. D. Johnson, 330 ft. from NE line and 2,310 ft. from NW line of the SW half of Sec. 9, H.&T.C.R.R., Blk. 24 ..... Drlg. 470 ft.
Wahlenmaier Pet. Corp.'s No. 1 R. M. Blodget, 990 ft. from SW line, 330 ft. from SE line of Sec. 26, H.&T.C. Sur., Blk. 5 ..... Drlg. 1,020 ft.

WINKLER COUNTY

Harry Adams et al's No. 3 Scarborough, 990 ft. from N line and 990 ft. from E line of Sec. 1, Blk. 77, P.S.L. Sur. ..... Drlg. 2,715 ft.
Colonial Oil Co.'s No. 2 State Scarborough, 990 ft. from W and 102½ ft. N of the NE cor. of Sec. 1, School Blk. 77, located in Sec. 1, Blk. W. F. ..... Rig up and S.D.
Sid Richardson's No. 3 John Scally, 2,310 ft. from the N line and 330 ft. from the W line of Sec. 94, G.&M.B.B.&A. Sur. ..... Shot with 140 qts. 3,170-3,208 ft.; flowing est. 127 bbls. per day after shot; pay 3,170-3,205 ft.
L. H. Wentz' No. 1 Daugherty, 330 ft. from N and 330 ft. W of Sec. 3, Blk. C-23, P.S.L. Sur. ..... Location.

Wildcat Operations in Texas Panhandle

Week Ending September 9

CARSON COUNTY

Company, well, farm name, section and block—	Remarks:
Reiger et al's No. 1 Foster, 330 ft. from N and E lines of SW Sec. 93, Blk. 7, I.&G.N.R.R. Sur.	Location.

GRAY COUNTY

British American Oil Prod. Co.'s No. 4 Phillips, 1,254 ft. from N, 330 ft. from W lines of W½ E½, Sec. 127, Blk. 3, I.&G.N.R.R. Sur.	Drlg. 110 ft.
Charles Black's No. 1 fee, 330 ft. from W, 661 ft. from S line of SW Sec. 45, Blk. 25, H.&G.N. Sur.	O.W.D.D.; T.D. 2,965 ft.
Bell O. & G. Co.'s No. 1 Webb, 330 ft. from N and E lines of Sec. 61, Blk. 25, H.&G.N. Sur.	Drlg. 2,250 ft.
British American Oil Co.'s No. 3 Phillips, 330 ft. from S and W lines of W½ E½ Sec. 27, Blk. 3, I.&G.N. Sur.	T.D. 3,270 ft.
Chism et al's No. 1 J. M. Carpenter, 330 ft. from N line, 330 ft. from E line of SE Sec. 37, H.&G.N. Sur., Blk. 25	Cellar.
Continental Oil Co.'s No. 4 Finley, Sec. 32, Blk. 2-B, H.&G.N. Sur.	O.W.D.D.; T.D. 2,957 ft.
Danciger O. & R. Co.'s No. 3 Wright, 990 ft. from S, 330 ft. from W lines of Sec. 13, Blk. 3, I.&G.N. Sur...	Coring 2,589 ft.
Denworth Oil Co.'s No. 2-B Webb, 330 ft. from N and W lines, SE NW Sec. 61, Blk. 25, H.&G.N. Sur.	Cellar.
Gulf Prod. Co.'s No. 5 Ellis Cockrell, 330 ft. from N and E lines of S½ Sec. 2, Blk. M-21, T.C.R.R. Sur...	Location.
Henc'on et al's No. 1 Husselby, 330 ft. S and E, SW SW Sec. 11, Blk. A-9, H.&G.N. Sur.	Rig.
Mazda-Shell's No. 4 Coombs-Worley, 990 ft. from N line, 330 ft. from E line, Sec. 35, Blk. 3, I.&G.N. Sur.	Rig.
Phillips Pet. Co.'s No. 7 Jackson, 990 ft. from E, 330 ft. from S lines of S½ SE Sec. 88, Blk. 2-B, I.&G.N. Sur.	Fishing 2,287 ft.
Phillips Pet. Co.'s No. 1 Palmer, 330 ft. from S and E lines of E 80 acres of Sec. 31, Blk. 2-B, H.&G. N. Sur.	Starting to test; T.D. 2,868 ft.
Phillips Pet. Co.'s No. 1 Benton, 360 ft. N, 345 ft. W from E lines of W½ E½ Sec. 63, Blk. 3, I.&G.N. R.R. Sur.	Moving in.
Baker Saulsberry's No. 1 John Cubine, 990 ft. from N and E lines, of SE Sec. 36, Blk. 25, H.&G.N.R.R. Sur.	Cellar.
Sinclair Prairie Oil Co.'s No. 3 P. A. Coomley, 1,300 ft. from S, 2,618 ft. from W lines of S 246 acres of Sec. 57, Blk. 3, I.&G.N. Sur.	Cmtd. csg. at 2,900 ft.
Skelly Oil Co.'s No. 1 L. H. Webb, 990 ft. from E line, 330 ft. from N line of S½ of Sec. 61, H.&G.N. Sur., Blk. 25	Drlg. 210 ft.
Skelly Oil Co.'s No. 5 Vicars, 440 ft. from N, 330 ft. from W line of E½ NW Sec. 127, Blk. 3, I.&G.N. R.R. Sur.	Bldg. rig.
Southern Pet. Explts. Co.'s No. 5 McConnell, 330 ft. from N, 990 ft. from W lines of NW Sec. 174, Blk. 3, I.&G.N.R.R. Sur.	Moving in rig.
Sun Oil Co.'s No. 2-B Combs-Worley, 330 ft. from S line, 990 ft. from E line of SW of Sec. 34, I.&G. N. Sur., Blk. 3	Cellar.
Texas Co.'s No. 6 Combs-Worley (O.W.D.D.), 330 ft. from N and W lines of S½ SE Sec. 36, Blk. 3, I. &G.N.R.R. Sur.	T.D. 3,305 ft.
Wilcox O. & G. Co.'s No. 23 Combs-Worley, 990 ft. from E line, 330 ft. from N line of Sec. 35, I.&G. N. Sur., Blk. 23	Drlg. 2,620 ft.
F. H. Yealy's No. 2 Crank, 960 ft. from N and E lines of N 160 acres of W 400 acres of Sec. 163, Blk. 3, I.&G.N.R.R. Sur.	Rig.

HUTCHINSON COUNTY

Huber Pet. Corp.'s No. 1-A Huber Dunaway, 330 ft. from S, 990 ft. from E lines of S 200 acres of Sec. 7, Blk. Y-s, T.C.R.R. Sur.	Cellar.
Phillips Pet. Co.'s No. 1 Ponter, 33 ft. from S and W lines of S 80 acres of E½ Sec. 6, Blk. M-21, T.C. R.R. Sur.	Location.
Dave Rubin-Henderson's No. 1 fee, 86 ft. from S, 299 ft. from E of SW cor. Sec. 82, Blk. 46, H.&T.C. R.R. Sur.	S.D. 441 ft.
H. Stekol's No. 4 G. A. Whittenburg, 450 ft. from N line, 990 ft. from W line, Sec. 38, Blk. M-23, T.C. R.R. Sur.	To test; T.D. 3,032 ft.

RANDALL COUNTY

Woolsey & Devore's No. 1 Belew, 330 ft. N, 1,320 ft. E of NE, Sec. 55, Blk. 2, A.B.&M. Sur.	Drlg. 3,905 ft.

WHEELER COUNTY

Elbar Corp.'s No. 1 Noel, 330 ft. from S and E lines of NE Sec. 54, Blk. 24, H.&G.N.R.R. Sur.	Old T.D. 2,482 ft.
Martin & Dubose's No. 1 Grogan, C NE Sec. 87, Blk. 22, H.&G.N. Sur.	Fishing 1,545 ft.
Mid-Kansas O. & G. Co.'s No. 1 Husselby, 330 ft. from S and E lines of SW Sec. 70, Blk. 24, H.&G.N. Sur...	T.D. 2,434 ft; est. 100-bbl. well.
Piney O. & G. Co.'s No. 1 J. P. Koons, 330 ft. from E line, 330 ft. from S line of E¼ NE Sec. 43, H.& G.N. Sur., Blk. 24	Running csg. 1,375 ft.
Skelly Oil Co.'s No. 1 M. Husselby, 330 ft. from S line, 330 ft. from W line of E¼ of Sec. 70, H.&G.N. Sur., Blk. 24	Rig up.

IT CAN'T BE ACCIDENT...

that Bridgeport's prestige has increased year after year...

that more and more successful operators "Call Bridgeport First"

ALWAYS MANY SPECIAL VALUES
HERE ARE A FEW

LINE PIPE—25,000 feet, good quality, used, 2-inch Lap-weld Line Pipe with 3⅝-in. Collars. Also liberal quantities of 3-inch and 4-inch. Material located: Wichita, McPherson, Pampa, Oklahoma City and Kilgore.

DRILL PIPE—5,000 feet 6⅝-inch, 25.20 lb., Reworked Drill Pipe with Tool Joints. This pipe has never been used in Kansas or a territory considered hard on Drill Pipe. In stock at Wichita.

TUBING—Several strings 2½-inch, 6.50 lb., 11½thd., good quality used External Upset Tubing. In stock at McPherson.

BOILERS—(3) 110 H.P., 250 lb. W.P., "Broderick" Super-Heated used boilers. First class condition and priced to sell. In stock at Conroe, Texas. Practically all sizes and types at other points.

ENGINE CLUTCH—"Superior" Type C-12A, Reversible Clutch for 50 or 40 H.P. Engine. Complete in every detail with outboard bearing. Thoroughly overhauled in our shops.

PUMPING ENGINE—40 H.P., 2-cycle, "Fairbanks-Morse" Gas Pumping Engine, complete with late type Reversible Clutch and water circulating pump. Guaranteed A-1 condition. Recently overhauled in our shops. In stock at McPherson.

GAS SEPARATORS—Two good used "Smith" Gas Separators; one type No. 10, large size; and one type No. 1, medium size. Both in first class condition and priced low. In stock at Pampa.

(All items offered subject to prior sale)

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The continued patronage, friendship, and good-will of hundreds of old customers through the years; the acquisition of many new friends during each succeeding year of our quarter-century existence; and a continually increasing business, is evidence, we believe, that a concern of our type, with our policies, and our ideals of what constitutes worthwhile service, has a useful and worthy place in the industry.

We believe, under the President's recovery plan we still have a useful service to render, and an obligation to fulfill to those who have made our past advancements possible; and we solicit the co-operation and continued patronage of our many friends, that we may Do Our Part to speed the arrival of National Prosperity.

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RENTAL FISHING and DRILLING TOOLS

Kansas Producers Claim They Have Demand for 20,000 Bbls. in Excess of Their Allowable

By JAMES McINTYRE

According to Marvin Lee, technical advisor to the Kansas Corporation Commission, producers in Kansas are dissatisfied with the allocation of 111,000 bbls. per day made by Secretary Ickes for that State. Kansas has been producing around 130,000 bbls. for some time past because there has been a demand for the oil. Mr. Lee is of the opinion that if production is cut to 111,000 bbls. in the face of a demand for 131,000 bbls. purchasers will go elsewhere to buy their oil and Kansas may lose a permanent market for 20,000 bbls. of crude daily.

"We are asking for an adjustment," Mr. Lee said Saturday.

It is said that most of the Kansas crude finds a market in Kansas refineries. Standard Oil Co. of Kansas, Skelly Oil Co., White Eagle Oil Corp., Vickers Refining Co., Dickey Oil Co., Derby Oil Co., Kanotex Refining Co. and other home firms are large users of Kansas oil. In fact all their oil supply comes from that State and is refined in their Kansas refineries. The Phillips Petroleum Co. in Kansas City, Kans., and Sinclair Refining Co. at Argentine, Kans., are also large users of Kansas crude.

To ascertain the market demand for Kansas crude, a check was made by the advisory committee of which Ralph Pryor is chairman. Other members are E. W. Pyle, Wolfe Creek Oil Co.; H. M. Williams, Mid-Kansas Oil & Gas Co.; Lee Scott, Vickers Petroleum Co., and Walter Fees, Iola, an eastern Kansas oil man.

Following their findings that the demand was 131,235 bbls. daily, the following statement was issued by Chairman Pryor:

"The State of Kansas will go on the reduced allowable of 111,000 bbls. per day at 7 a. m., Friday, September 8.

"The reduction from the higher July production of about 135,000 bbls. daily will be adjusted by the State Corporation Commission so as to be the most equitable between purchasing companies, between fields, and between leases.

"Kansas purchasers have requested a daily supply of 131,235 bbls. of crude which obviously cannot be supplied from the allocated 111,000 bbls.

"The State Corporation Commission is requesting, by letter to all purchasing companies, a report of their purchases for the first 10 days, for the assistance of the state oil umpire in readjusting the supply and demand under the new allocation under the code."

Production of Pools

The estimated average daily production of important pools in Kansas for the week ending September 9 and for the preceding week was as follows:

Field or pool—	Sept. 9	Sept. 2
Hollow	11,910	13,055
Ritz-Canton	20,925	23,620
Voshell	6,760	6,870
Sedgwick County	9,370	9,430
Nikkell	6,850	7,505
Ellsworth County	3,459	3,177
Rice County	6,547	6,916
Barton County	345	347
Reno County	1,884	502
Greenwood County	11,200	11,150
Butler County	18,460	17,660
Other pools	29,745	30,033
Total Kansas	127,375	129,505

Results in Hollow Pool

In the Burrton district, Harvey County, Olson and the Shell Petroleum Corp.'s No. 2 Day, C NW NW Section 19-23-3w, was being treated with 1,000 gallons of acid after it had swabbed 10 bbls. of oil and a like quantity of water in four hours from 3,340-75 feet.

In the Hollow Pool, in northeastern Harvey County, Derby Oil Co.'s No. 4 Schmidt, NE SW NW Section 17-22-3w, swabbed 5 bbls. per hour from Hunton lime at 3,417-51 feet. It will be acidized.

Skelly Oil Co. and Selby Oil & Gas Co.'s No. 4 Schmidt, NW SW NW Section 17-22-3w, was shot with 20 quarts and swabbed 151 bbls. in five hours. It will be acidized again. Total depth is 3,452 feet, the base of the Hunton lime.

Frost, Study and others' No. 1 Martens, NE SE SE Section 19-22-3w, pumped 900 bbls. in 24 hours and was completed. It had Hunton lime at 3,456 feet, first oil at 3,468 feet, total depth 3,472 feet.

Mid-Kansas Oil & Gas Co.'s No. 4 Duerkson, NE SE NE Section 19-22-3w, had Hunton lime at 3,470-92 feet. It swabbed 250 bbls. in four hours. It will be acidized.

Producers & Refiners Corp.'s No. 5 Martens, SW NW SE Section 19-22-3w, swabbed 120 bbls. in six hours from Hunton lime at 3,384-3,405 feet. It was given 1,000 gallons of acid and swabbed 85 bbls. in two hours.

The Sinclair Prairie Oil Co.'s No. 3 Ediger, SE cor. SW Section 19-22-3w, was flowing 100 bbls. an hour from Hunton lime at a total depth of 3,351 feet. The same company's No. 2-A Neufeldt, CEL SE Section 18-22-3w, started at 60 bbls. an hour from chat, total depth 3,180 feet.

Magnolia Petroleum Co.'s No. 2 Schmidt, a twin, NE NW NE Section 30-22-3w, pumped 960 bbls. in 24 hours from Wilcox sand at 3,507-26 feet.

The Ima Oil & Gas Co.'s No. 2 Lehman, NW NE SE Section 35-22-2w, east of the Hollow Pool, was dry and abandoned at 3,275 feet. The hole filled with water at 3,025 feet, after 6-inch pipe was set at 3,015 feet.

In the McPherson Pools

In the Nikkell Pool, McPherson County, Mabee and the Shell Petroleum Corp.'s No. 2 Nikkell, SE NE SW Section 33-21-3w, was rigging up standard tools to complete. Base of the Hunton lime was found at 3,468 feet; total depth 3,473 feet.

Continental Oil Co.'s No. 1 Tipton, NW SW NE Section 2-20-3w, in the Voshell Pool, was given 1,000 gallons of acid but it did not increase the production reported last week, which was 130 bbls. in 24 hours on the swab.

Texas Co. was rigging up to drill deeper in No. 3 Munn, NE SE NE Section 12-20-3w. Same company's No. 5 Munn, NE cor. Section 12-20-3w, an old well drilled deeper, pumped 320 bbls. in 24 hours after an acid treatment in Viola lime. It was completed.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 4 Lovett, SW cor. Section 13-19-2w, Ritz-Canton Field, had Viola lime from 3,376 to 3,403 feet. It swabbed 40 bbls. in 12 hours and was to be acidized.

Rosenthal and others made a location for No. 2 Knudson, SE SW SE Section 23-19-2w.

Lario Oil & Gas Co. and Shell Petroleum Corp.'s No. 4 Miller, SW SE SE Section 24-19-2w, was treated with 500 gallons of acid in Viola lime at 3,388-3,419 feet, and later it pumped 216 bbls. in 18 hours. It was completed.

Phillips Petroleum Co. and Shell Petroleum Corp.'s No. 2 Wiles, CEL NE Section 25-19-2w, was treated a second time with acid in Viola lime at 3,405-14 feet and when placed on the pump made 150 bbls. in 24 hours. It may be acidized a third time.

Breslin and others have made a location for No. 2 Flook, SE NE NW Section 35-19-2w.

Gleason and others' No. 1 Hamilton, NW cor. SW Section 28-19-1w, had 500 feet of oil in the hole from Viola lime at 3,422-31 feet, and had a fishing job.

United Oil Co. and Shell Petroleum Corp.'s No. 2 Smith B, NE cor. NW Section 19-19-1w, had chat at 2,937 feet, set 8-inch at 2,941 feet and drilled to 2,998 feet. The well flowed 217 bbls. in 20½ hours and 2,500,000 feet of gas.

Mid-Kansas Oil & Gas Co.'s No. 2 Garrett, NW SW NE Section 30-19-1w, swabbed 5 bbls. per hour from Viola lime at 3,411-19 feet. It was to be acidized.

Phillips Petroleum Co. and Shell Petroleum Corp.'s No. 3 Garrett, SW NW NE Section 30-19-1w, swabbed 10 bbls. an hour for three hours from Viola lime at 3,417-24 feet. It is being acidized.

Extends Raymond Pool

In the Raymond Pool in Rice County, Palmer and others' No. 1 Specht, SE SW SW Section 16-20-10w, pumped 410 bbls. of oil and 12 bbls. of water in 18 hours from Siliceous lime at 3,130-39 feet. This well extends the pool a half mile north.

Texas Co.'s No. 2 West, SW cor. NW Section 21-20-10w, found Siliceous lime at 3,337 feet, set 8-inch casing at 3,338 feet and drilled to 3,349 feet. The hole filled 2,750 feet with oil in six hours and the crew was preparing to test.

In the Chase townsite pool, Gypsy Oil Co.'s No. 1 Burden, NE SE SE Section 31-19-9w, swabbed 765 bbls. in 16 hours and was completed. Siliceous lime was found at 3,217-27 feet.

Gypsy Oil Co. has rig up for No. 1 Lisk, NW NE SW Section 32-19-9w, and for No. 1 Rife, SW cor. Section 32-19-9w.

Gypsy Oil Co.'s No. 1 McGlynn, NW SW SW Section 32-19-9w, which found Siliceous lime at 3,212-19 feet, swabbed 643 bbls. in 20 hours. It is a completion.

Elmer Corn and others have made a location for No. 1 Hunter, NE cor. Section 35-19-7w, on a core drilled structure.

New Wells in Stoltenberg Pool

In the Stoltenberg Pool, Ellsworth County, Gypsy Oil Co.'s No. 1 Orth, SW cor. Section 16-16w, swabbed 140 bbls. in two hours from Siliceous lime at 3,357-67 feet.

Gypsy Oil Co. and Stanolind Oil & Gas Co.'s No. 1 Stoltenberg, SW SE NW Section 22-16-10w, swabbed 211 bbls. of oil and 170 bbls. of water in 24 hours from Siliceous lime at 3,337-45 feet. It was completed.

Aylward and Barnsdall Oil Co.'s No. 1 Wamhoff, NE NW NE Section 26-16-10w, had Siliceous lime at 3,395 feet, total depth 3,400 feet. The hole filled 150 feet with fluid, and will be acidized.

New Locations in Reno

Two wildcat locations have been made in Reno County, and rotary rigs are up.

(Continued on Page 50)

Wildcat Operations in Kansas

(Descriptions are East unless marked otherwise)

BARTON COUNTY

Company, farm and location—	Remarks:
Atlantic O. P. Co.'s No. 1 Schneider, C NE SW Sec. 15-20-13w	Spudded.
Heimerich & Payne's No. 1 Everhigh, C SW SE Sec. 13-18-13w	Drlg. 1,320 ft.
Skelton et al's No. 1 Ott, C SE SE Sec. 16-19-14w	O.W.D.D.; drlg. 3,685 ft.

BUTLER COUNTY

Hartman et al's No. 1 McCann, SE SW NW Sec. 7-25-3	Set 7-in. csg. 2,791 ft.

COWLEY COUNTY

E. Yarnell's No. 1 Speer, SE NE NE Sec. 31-33-4	S.D. 1,400 ft.

DICKINSON COUNTY

Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 15-15-1	Spudded and S.D.

DOUGLAS COUNTY

Haslett et al's No. 1 Churchbaugh, C SW SW Sec. 10-14-19e	Dry and abd. 1,275 ft.

FINNEY COUNTY

National Ref. Co. et al's No. 1 Smith, C SE SW Sec. 3-23-29w	Rigging up.

GEARY COUNTY

Ledaurie' No. 1 Fechner, C SE NE Sec. 27-13-8	S.D. 967 ft.

GRAHAM COUNTY

Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-25w	S.D. 4,180 ft.

HARVEY COUNTY

Holbart Oil Co.'s No. 1 Harder, SE SW SE Sec. 11-23-1e	Drlg. 1,070 ft.
L. H. Wentz' No. 1 Bestvater, SW SE SW Sec. 8-23-1e	Drlg. 2,275 ft.

KINGMAN COUNTY

D. R. Lauck et al's No. 1 Church, SE SW NE Sec. 10-28-6w	Drlg. 3,600 ft.
Olson and Skelly Oil Co.'s No. 1 Emery, C SW NW Sec. 22-25-6w	Moving in rotary.
Regina O. & G. Co. et al's No. 1 Wilson, NW NE	Rotary rig.

MARION COUNTY

Hutchinson Oil & Gas Co.'s No. 1 Miller, NW cor. Sec. 6-17-2	S.D. 2,700 ft.

McPHERSON COUNTY

Sever and Hessman's No. 1 Scrag, 5¼ SE Sec. 22-19-4w	Rig on ground
Regina O. & G. Co.'s No. 1 Vogts, C SE SE Sec. 3-20-1w	Drlg. 2,405 ft.
Roth & Faurot's No. 1 Swanson, NE SW NE Sec. 13-19-3w	Rig
Jim Madison's No. 1 Boerker, SE NW Sec. 29-20-1w	Spudded.
Paramount Oil Co.'s No. 1 Steinkirchner, NE SE SE Sec. 25-19-1w	Drlg. 1,435 ft.

PRATT COUNTY

Minnesoah O. & G. Co.'s No. 1 Hardesty, SW SE SE Sec. 28-27-11w	H.P.W. 4,417-27 ft.; pulled 5-in. pipe and P.B. to 3,640 ft.

RENO COUNTY

Watchorn O. & G. Co.'s No. 1 Soper, C NE NE Sec. 31-25-4w	Drlg. 3,950 ft.
Mylius et al's No. 1 Patton, SE NE Sec. 35-23-5w	Drlg. 3,933 ft.
Roth & Faurot's No. 1 Yoder, C NW NW Sec. 15-24-5w	Crooked hole; S.D.

RICE COUNTY

Garden et al's No. 1 Thodel, C NW NW Sec. 11-21-7w	T.D. 3,280 ft.; swbd. 23 bbls. in 1 hr.

WOODSON COUNTY

Tom Palmer et al's No. 1 Naylor, NE SW NE Sec. 14-24-14	Dry and abd. 1,640 ft.

Oklahoma Cuts Production Below Allowable Set by Ickes' Order, Effective September 8

By JAMES McINTYRE

Oklahoma fared well in the matter of allocation of production. Secretary Ickes allows Oklahoma to produce 540,000 bbls. per day. In the past week the State produced an average of 513,860 bbls. and the previous week 548,140 bbls. Of course it could produce vastly more than its new allowable, but Oklahoma has been one state that has made a serious attempt to level its production to demand and therefore it needed no great cut.

Oklahoma City Potentials

New potentials in Wilcox sand wells in the Oklahoma City Field thus far computed show a net decline of 33 per cent in oil and 47 per cent in gas. The figures cover 45 wells. None of the wells showed water cutting.

It was estimated that wells in Section 3-11-3w were showing a 40 per cent decline in potential while those in Section 10 were 45 per cent off. The new potentials will be effective October 1. The work of taking the potentials will yet consume some time.

It is reported that salt water has reached some of the Wilcox sand wells in the north end of the Oklahoma City Field. This increase in the number of wells making water has been expected for some time. It is too early to predict the effect it will have upon future production from this zone or the rate with which it will move through this formation. It is reported, however, that the formation pressure in the Wilcox sand is about 900 pounds per square inch and the water is under hydrostatic pressure of over 2,000 pounds. This differential in pressures may cause this water to move into the Wilcox sand much as water flooded a portion of the lower Simpson wells. To reach the Wilcox wells now reported as showing salt water the level of the water in that portion of the field would have to be approximately —5,275 feet below sea level datum.

Oklahoma Daily Production

Estimated daily average production in Oklahoma pools for the week ending September 9 and for the preceding week follows:

Field or pool—	Barrels Sept. 9	Sept. 2
Allen	11,225	10,995
Bowlegs	12,675	14,080
Bristow-Slick	11,150	11,200
Burbank	9,700	9,700
Lucien	5,080	4,305
Carr City	8,195	8,400
Earlsboro	10,975	11,020
East Earlsboro	18,100	18,110
South Earlsboro	1,820	1,835
Little River	20,600	20,340
East Little River	830	385
Oklahoma City	173,155	205,970
Seminole	12,285	13,960
East Seminole	1,345	1,810
Searight	2,935	3,035
Maud	1,520	1,455
Mission	5,915	6,120
Cushing-Shamrock	13,000	13,000
St. Louis-Pierson	30,620	30,235
Tatums-Sholem Alechem-Tussey	13,750	13,475
Other pools	148,485	148,210
Total Oklahoma	513,860	548,140

Commission Hearings

On the day this was written, Tuesday, September 12, the Corporation Commission is scheduled to hear cases in which overproduction charges will be made and answered, and to pass on the question of what to do with wells in the Greater Seminole Field which are making a large proportion of salt water. Companies in the Seminole, St. Louis and Searight Pools are expected to ask for a special classification for certain leases in those named pools. Adjusted potentials will be asked on certain Oklahoma City wells. The commission will on Friday, September 15, take up the matter of a permanent order relative to September allowables. These were recently fixed temporarily by the commission.

Wilcox Sand in Keokuk Falls

An important discovery was made in the Keokuk Falls area in Seminole County, when the Carter Oil Co., drilling a Wilcox sand test on the Ray farm, in Section 23-11-6, found that sand at 4,531-38 feet with a good saturation of oil. Casing was set and cemented and the crew was drilling out plug on Monday.

Vaughn and others' No. 1, C NW NE SW Section 33-7-4, in the St. Louis district, Pottawatomie County, found dolomite at 4,170 feet and oil at 4,215 feet, total depth 4,219 feet. It was acidized and later swabbed 1,012 bbls.

Wildcat Operations in Oklahoma

Northern Oklahoma

ALFALFA COUNTY

Company, farm and location—	Remarks:
Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w	Small showing 5,910-17 ft.

BECKHAM COUNTY

Pattee Royalty Co.'s No. 1 Goose Tree, SW SE SW SE Sec. 32-10-25w	Drlg. lime 3,870 ft.

CADDO COUNTY

Denver P. & R. Co.'s No. 1 Nos, NW SW SW Sec. 34-10-10w	S.D. 9,540 ft.

COAL COUNTY

Dodd & Burton's No. 1 Grigsby, NW SE NE Sec. 35-1-3	Shot 5 qts.; 1,000 ft. oil in hole.
Funk & Russell's No. 1 Miller, SE NE Sec. 10-2-5	Fishing 1,750 ft.

GARFIELD COUNTY

J. H. Lewis' No. 1 Clark, C NW NW Sec. 34-21-6w	Drlg. 1,970 ft.

HUGHES COUNTY

Donley et al's No. 1 Shepard, SE NE Sec. 4-8-8	Lost tools; abd. 1,640 ft.
Dixie-Lee Oil Co.'s No. 1 Taylor, C NW Sec. 27-5-10	Drlg. 350 ft.
Pioneer Pet. Co.'s No. 1 Brock, SE cor. Sec. 26-5-11	Spudded in and S.D.
Redwine et al's No. 1 Badger, C N half SW SW Sec. 4-5-11	S.D. 330 ft.
Scruggs et al's No. 1 Black, NE Sec. 13-9-10	Rigging up.

KAY COUNTY

Blaunar et al's No. 1 Maple, NE NW SE Sec. 20-27-4	Drlg. 2,542 ft.
Morgan et al's No. 1 Bush, NW NE NE Sec. 25-28-4	Drlg. 800 ft.
Burton Lewright et al's No. 1 Leseman, SW NE SE Sec. 4-28-2	Rig.

KIOWA COUNTY

Christian's No. 1 Jones, NE NW Sec. 8-7-15w	S.D. 1,904 ft.
McWhirter et al's No. 1 Vanderneck, NE NW Sec. 3-7-19w (O.W.D.D.)	S.D. 2,155 ft.

LINCOLN COUNTY

J. Garfield Bull's No. 1 Smith, NW SE Sec. 26-16-4	Wilcox sand 3,857-63 ft.; wtr.
Magnolia Pet. Co.'s No. 1 Wagoner, SW SE Sec. 2-14-3	Wilcox sand 4,984-89 ft.; 1,320 bbls. in 24 hrs.; comp.
Amerada Pet. and Stanolind O. & G. Co.'s No. 1 Martinek, NW SE Sec. 35-13-5e	Cellar.
Amerada Pet. Co.'s No. 1 Long, C NW NW SW Sec. 12-13-6	Drlg. 3,210 ft.

MARSHALL COUNTY

Robb et al's No. 1 Vittitoe, NE SE Sec. 11-5s-4e	Rigging up rotary tools.

MURRAY COUNTY

A. B. Harden's No. 1 Sadler, NE Sec. 19-1-2	Rig.
T. E. Revells et al's No. 1 Wolfe, NE cor. Sec. 18-1-2	Drlg. 400 ft.

MUSKOGEE COUNTY

J. S. Routt et al's No. 1 Escoe, CWL SE NE Sec. 17-13-17	Drlg. 905 ft.

NOBLE COUNTY

Wentz & Feagen's No. 1 Eyler, C SE SW Sec. 10-21-2	Drlg. 4,362 ft.

OKLAHOMA COUNTY

Houston et al's No. 1 Ketcham, CSL NW NE SE Sec. 32-14-3w	Drlg. 5,115 ft.
Mid-Continental Oil Co.'s No. 1 Edwards, C SE SE Sec. 19-11-1	S.G. 3,180-80 ft.; S.D. 3,341 ft.
H. E. Rapp's No. 1 Price, CEL NE SW Sec. 19-14-3w	Drlg. 6,322 ft.
F. Russell's No. 1 Heapley, SW NW NE Sec. 23-12-3w	Drlg. 6,314 ft.

PAYNE COUNTY

Kemp & Nunneles's No. 1 Crane, SW SE SW Sec. 10-17-6	Drlg. 2,745 ft.
O. N. Maines et al's No. 1 Scheidberg, NW SW NW Sec. 27-22-6	Wilcox sand 3,114-38 ft; wtr.; S.D.

PITTSBURG COUNTY

Moffett & Hall's No. 1 Jones, C NE NW Sec. 14-5-14	S.D. 3,210 ft.

PONTOTOC COUNTY

Galbreath's No. 1 Stafford, NE SE SE Sec. 31-2-6	Drlg. 340 ft.
Gilbert's No. 1 Starritt, NW SE Sec. 28-4-4	Drlg. 1,313-20 ft; 5,000,000 ft. gas.
Choctaw O. & G. Co.'s No. 1 Thompson, SW NE SW Sec. 1-1-7	Drlg. sand 1,555 ft.
W. B. McGraw's No. 1 Mayhue, NE Sec. 19-3-6	Drlg. 1,180 ft.
McGee et al's No. 1 Newborn, SW NE Sec. 31-5-4	Rig.
Williams' No. 1 Kroth, NE SE Sec. 33-3-4	H.F.W. 1,977 ft.
Wirrick's No. 1 fee, SE SW Sec. 29-2-7	Sylvan at 3,451-54 ft.; flowed 38 bbls.; C.O.
Sledge et al's No. 1 Worley, SW SE SW Sec. 22-3-7w	Set 10-in. csg. 1,155 ft.; drlg. plug.

POTTAWATOMIE COUNTY

Payne Drlg. Co.'s No. 1 Levelace, NW SW NW Sec. 27-6-4	T.D. 3,780 ft.; csg. collapsed.

SEMINOLE COUNTY

Sinclair Prairie's No. 1 Tierney, SE cor. Sec. 2-11-6	P.B. 2,700 ft.; drlg. 2,885 ft.
Stewart & Egan's No. 1 Sanderson, NE SW Sec. 27-6-5	Drlg. 3,220 ft.
Filmico's No. 1 Bowlegs, SE NE SW Sec. 1-7-7	S.D. 800 ft.
Armstrong et al's No. 1 Diamond, NE SE SW Sec. 8-6-7	Set 8-in. csg. 3,918 ft.; T.D. 4,044 ft.; H.F.W.; P.B. to 4,021 ft.; S.D.

WASHITA COUNTY

McWhirter & Best's No. 1 Hall, SW SE SE Sec. 23-8-19w	Drlg. 180 ft.

Southern Oklahoma

ATOKA COUNTY

Blake's No. 1 Galbreath, SW NE SE Sec. 5-3-15	Drlg. 348 ft.
Malernee et al's No. 1 Cole, NE NW Sec. 19-2s-14	Drlg. 638 ft.
L. E. Stewart et al's No. 1 Stewart, SE SE Sec. 2-4s-10	S.D. 2,951 ft.

JEFFERSON COUNTY

Wakefield's No. 1 Kelly, NW SE Sec. 1-5s-5w	Drlg. 550 ft.

STEPHENS COUNTY

Doyle Oil Co.'s No. 1 Cunningham, SE NE NW Sec. 4-1-5w	Drlg. 2,500 ft.

TILLMAN COUNTY

J. H. Everett's No. 1 Crane, SW cor. Sec. 15-3s-14w	Rig.

MAJOR COUNTY

Paul R. Robb's No. 1 Vittitoe, C NE SE Sec. 11-5-4	T.D. 105 ft.; S.D.

E. H. Moore and others' test, in C SE SE SW Section 29-2-7, Pontotoc County, had Hunton lime at 3,116 feet and Sylvan shale at 3,451-54 feet. It will be given a treatment with acid.

Wentz & Feagin's No. 1 Eyler, in Section 10-21-2, Noble County, which is reported elsewhere in this account, at a total depth of 4,360 feet, was later reported to have found dolomite at 4,395 feet, total depth 4,399 feet. No oil or gas has been reported from the lower levels.

The Carter Oil Co. and others' Wilcox sand test, No. 1 Ray, C W half NE NE Section 23-11-6, Keokuk Falls area, Seminole County, cored Wilcox sand at 4,531-38 feet and found good saturation of oil. Pipe was set and on Monday drilling out plugs was started.

Anderson & Kerr's No. 1-A Coleman, NW SE NW Section 22-10-7, Seminole County, was abandoned as a failure at 4,134 feet and the same operators have abandoned the location for No. 1 Anderson, SW NW NE Section 22.

The Phillips Petroleum Co. drilled deeper in a Calvin sand well, No. 5 Fixico, SW NW Section 20-9-6, in the Seminole Pool. Base of the Calvin sand was found at 2,750 feet; second sand at 2,756-60 feet. The well flowed 918 bbls. in 24 hours. This is a twin to No. 6 Fixico, a Calvin sand test, which at 2,769 feet, flowed 473 bbls. of oil, 1 per cent water. No. 6 Fixico was tubed and would not flow, so the tubing was being pulled.

W. D. Grisso has abandoned as dry his No. 1 Swarb, SE NW Section 2-8-4, Pottawatomie County, total depth 4,348 feet.

Atlantic Oil Producing Co. has rig up for No. 1 Davis, SW NE SE Section 13-8-6, Seminole County.

Donley and others have abandoned No. 1-B Shepard, SE NE Section 4-8-8, Hughes County, after a hopeless fishing job. The well had been shut down since March.

In the South St. Louis Area

In the South St. Louis district, Pottawatomie County, Keyokla Petroleum Co. made a location for No. 1 McGee, SE SW SE Section 4-7-4. E. W. Jones and others have made location for No. 1 Villiness, SE SW Section 18-7-4.

Hilton Phillips and others' No. 2 Brister, SE SW SE Section 21-7-4, swabbed 450 bbls. of oil and 200 bbls. of water from dolomite pay at 4,201-02 feet, total depth. Simpson sand was topped at 4,135 feet and top of the dolomite was found at 4,175 feet. It is a completion.

Amerada Petroleum Corp. was rigging up rotary for No. 2 Harrison, NE NW SW Section 33-7-4, Turman Oil Co. and others were drilling at 1,595 feet in No. 1 Ward, SE NW Section 33-7-4. Hall & Briscoe's No. 1 Brown, SW NW Section 33-7-4, found Viola lime at 4,076 feet, set 6-inch pipe at 4,072 feet and was waiting for cement to set. Total depth is 4,089 feet. No. 2 Brown, NW SW Section 33, had surface pipe set at 115 feet and was waiting for cement to set.

Vaughn and others' No. 1 Lowther, NW NE SW Section 33-7-4, was tested again in the past week. It made 835 bbls. in one day on the swab and was then drilled a little deeper, to 4,219 feet and swabbed 1,080 bbls. in 24 hours. It was given 1,500 gallons of acid.

Moebris and others had cellar dug for No. 1 Sullivan, SE NE NW Section 34-7-4. Helmerich & Payne had rig up for

No. 1 Billington, SE SW Section 3-7-5, and Superior Oil Co. had location staked for No. 1 Wood, SE NE SW Section 31-7-5.

In the West Holdenville area, Hughes and Seminole Counties, Buckner & Tate will deepen No. 1-A Scott, SW NE NE Section 4-7-8. Eight-inch pipe was set at 3,328 feet; total depth 3,350 feet. Buchner and others have abandoned at 460 feet their No. 2 Chapman, SW SE SE Section 10-7-8. Elliott and the Shell Petroleum Corp. have machine in for No. 1-A Pickens, SE SE NE Section 15-7-8. Limestone Oil & Gas Co.'s No. 8 Walker, SW SE NE Section 15-7-8, which pumped 70 bbls. of oil and 30 bbls. of water from Calvin sand at 1,186-90 feet, is a completion. Mid-Continent Petroleum Corp.'s No. 4 Factor, NW NE SE Section 18-7-8, had Calvin sand at 1,175-1,203 feet and pumped 25 bbls. a day. It was completed. Baskin & Leeper had a hole full of water and a small showing of oil in Calvin sand at 1,140-62 feet in No. 1 Coppedge, SE cor. Section 16-7-8.

Jarvis & Holm have a rig up for No. 3 Fish (a twin), NE NW NE Section 30-7-8.

E. W. Jones and others' No. 1 Lucas, NW NE NW Section 2-6-4, set 6-inch pipe at 4,078 feet, after getting Viola lime at 4,075 feet and drilling to 4,102 feet, and standard tools were being rigged up.

Superior Oil Co.'s No. 1 Hamm, NE cor. Section 5-6-4, got dolomite at 4,171 feet and drilled to 4,192 feet. The well made 40 bbls. on the swab. It was then acidized, and later swabbed 325 bbls. in 16 hours. It was deepened to 4,214 feet and then swabbed 142 bbls. in eight hours. While it was being given an acid treatment the well staged a 20-minute flow of 71 bbls. It was shen shut in.

Gypsy Oil Co. was drilling at 617 feet in No. 2 Tenwas, a community test, in the SW NW Section 25-6-4.

Amerada Petroleum Corp. was drilling at 185 feet in No. 1 Smith, NE NW Section 6-6-5.

Stanolind Oil & Gas Co., Amerada Petroleum Corp. and Indian Territory Illuminating Oil Co.'s No. 1 Reed, SW cor. Section 25-6-7, Sasakwa townsite, Seminole County, the vagaries of which have puzzled many oil men has been put on the air lift and produced 774 bbls. in 17 hours from second Wilcox sand at 4,051-73 feet. Previously the well had flowed 3,338 bbls. in 14 hours and then quit, later coming back with 918 bbls. in 24 hours through 2½-inch tubing. Ever since the well came in it has been gushing a large production of oil for a few hours and then "going dead" only to revive in a few hours to stage another performance of a like character. The owners of this well were rigging up rotary to drill No. 1 Landowners, SE cor. Section 26-6-7, and their No. 1 Hurbert, NE cor. Section 35-6-7, was drilling below 2,800 feet, after finding Brown lime at 2,340 feet and Gilcrease sand at 2,-625 feet. Keyokla Petroleum Co.'s No. 1, on Block 3, NE NW SW, got Gilcrease sand at 2,672 feet, a showing of oil at 2,690-93 feet, Wapanucka at 2,855 feet, Cromwell sand at 2,970 feet, and was drilling at 3,285 feet.

Chamberlain and others have abandoned the location for No. 1 Scott, NE SE NW Section 23-6-8. Huffman Drilling Co. was drilling below 300 feet in No. 1 Scott, NW cor. SE Section 23-6-8. This is wildcat territory in Hughes County.

In Pontotoc County

W. A. Delaney's No. 2-B Busby, SE SW SE Section 20-5-8, Pontotoc County, was abandoned as dry at 906 feet. Sand was penetrated at 882-906 feet.

Orr & Tilley abandoned the location for No. 1 Barnard, SW NE Section 8-4-7, Pontotoc County.

Delaney and others have made a location for No. 1 Hardin "A," NE NW NW Section 30-2-7.

Oklahoma City and Outside

The Blackwell Oil & Gas Co.'s No. 1 School Land, SW SE Section 36-12-3w, Oklahoma County, which was plugged back from 6,768 feet to 6,708 feet, was tested and made 13,000,000 feet of gas and at the rate of 5 bbls. of salt water per hour. It is being plugged back. It had made 4,000,000 feet of gas and a lot of salt water at the old total depth. Denver Producing & Refining Co.'s No. 1 Freight House, near SW cor. SE NW NW Section 3-11-3w, was at a total depth of 6,492 feet and the crew was laying down the drill pipe. It had Wilcox sand at 6,363 feet and set 6-inch casing at 6,364 feet and drilling was continued to 6,492 feet. No oil showings were reported in any formation penetrated. Same company's No. 2, CNL SE NW NW Section 3-11-3w, had checkerboard lime at 5,470 feet and was drilling at 6,297 feet. These are Oklahoma City townlot tests. Three wells in Section 15-11-3w, were drilling deeper. Phillips Petroleum Co. and others' No. 2 Classen, SW NW Section 15, was bailing at 6,-516 feet. Wilcox sand was topped at 6,-425 feet. Pierce and others' No. 1 Shepard, C NE NW SE Section 15, had Wilcox sand at 6,390 feet and was drilling at 6,400 feet. Stauffer, Stephens and others' No. 1 Anderson, SE Section 15, had Wilcox sand at 6,385 feet and was drilling at 6,480 feet. Phillips Petroleum Co.'s No. 2 Beaucamp, SE Section 22-11-3w, set 7-inch pipe at 6,514 feet, total depth 6,525 feet, and No. 3 Beaucamp was drilling at 6,506 feet.

Lincoln County

J. Garfield Buel and others' No. 1 Smith, NW SE Section 26-16-6, Lincoln County, was shut down with water showing from the Wilcox sand at 3,857-63 feet.

Magnolia Petroleum Co.'s No. 1 Wagner, SW SE Section 2-14-3, Lincoln County, which had the top of the Wilcox sand at 4,984 feet and drilled to 4,-989 feet, flowed 1,330 bbls., 1,200 bbls. and 1,180 bbls. per day on a three-day test, and the company completed the well. Amerada Petroleum Corp. and Stanolind Oil & Gas Co. have made a location for No. 1 Brill, NW NE Section 11, offsetting the Magnolia well. This was wildcat territory and the success of the Magnolia Petroleum Co. will lead to its development as it has long been regarded as favorable for oil.

Amerada Petroleum Co. and Stanolind Oil & Gas Co.'s No. 1 Martinek, NW SE Section 35-13-5, has cellar dug. This will be a wildcat test.

Osage County

The Indian Territory Illuminating Oil Co.'s No. 1, C NE NE NW Section 8-25-6, Osage County, was getting ready to shoot sand at 2,786-2,840 feet in which it had 700 feet of oil.

The Producers & Refiners Corp.'s No. 1, SW cor. NW Section 15-24-7, was flowing 90 bbls. a day from Bartlesville sand at 2,575-2,630 feet. Preparations were being made for a shot.

The Idaho Oil Co. made a location for No. 6, NE SW NE Section 11-21-11.

Noble County

Wentz & Feagin's No. 1 Eyler, C SE SW Section 10-21-2, a wildcat in Noble County, which has been closely observed for several weeks, was drilling at 4,362 feet. Chatanooga shale was penetrated at 4,285-4,336 feet; Viola lime at 4,336 feet; Simpson dense was found at 4,360 feet. Nothing had shown in these formations.

In the Lucien Pool, where eight wells are drilling, the Shell Petroleum Corp.'s No. 1 J. Boley appeared nearest to completion. It was at a total depth of 5,-046 feet, Viola lime was topped at 5,-020 and 8⅝-inch casing was set at 5,-033 feet.

Northwestern Wildcats

In Kay County, Burton Lewright and others were building rig for No. 1 Leseman, a wildcat, SW NE SE Section 4-28-2e. Dave Morgan was drilling at 1,-055 feet in No. 1 Cooper, a wildcat, NW NE NE Section 25-28-4. He had 450,000 feet of gas at 480-500 feet.

In Alfalfa County, Acre and others' No. 1 Acre, C SW NE Section 14-24-11w, an old well drilled deeper, got Oswego lime at 5,810 feet; and showings of oil and gas at 5,910-17 feet, in lime.

Payne County

Deep Rock Oil Co.'s No. 2 Harris, SW cor. NE Section 9-18-5, Payne County, was drilling at 3,507 feet. Six-inch casing was set at 3,481 feet and Misener sand with a 5,000,000-foot gas production was found at 3,491-95 feet. Viola lime was topped at 3,495 feet.

Developments in Creek County

In Creek County, Big Four Petroleum Co.'s No. 1 McNac, SW SE SE Section 34-19-8, made 75 bbls. in 24 hours, after a shot in Red Fork sand at 2,610-41 feet.

Doke & Hughes' No. 1 Boyd, NW SW SE Section 29-19-9, was dry and abandoned at 2,400 feet, in Bartlesville sand.

Comail Oil Co. completed No. 3 Brewer, C W half SW NE Section 8-18-7, which swabbed 120 bbls. in 24 hours, after a shot at 2,450-2,513 feet.

Bert Swift's No. 1 Grayson, NE SW NW Section 3-18-8, swabbed 90 bbls. in 24 hours, following a shot in Red Fork sand at 2,644-72 feet.

Alma Oil Co. has started drilling No. 1 Jacobs, SE cor. NE Section 12-17-7.

Smith and others were cleaning out No. 3 Tucker, SE NW SW Section 14-17-8, after a shot in Layton sand at 1,-368-1,402 feet. The shot resulted in a 15-bbl. showing.

Curtis Oil Co. was drilling at 275 feet in No. 1-A Sims, NE SE SE Section 6-17-10, and A. B. Ice had a machine in for No. 1 Crawford, SE NW NW Section 15-17-10.

J. K. Leard and others' No. 1 Johnson, NE SE NW Section 14-13-9, Okfuskee County, is a 20,000,000-foot gasser. Dutcher sand was found at 3,054-56 feet, with a small showing of oil and shale was drilled at 3,056-67 feet, and the gas sand at 3,067-70 feet.

Gray and others' No. 1 Townsend, SW NE NW Section 11-18-8, had a hole full of water in Bartlesville sand at 2,-606-90 feet, and was abandoned.

Completions in Wagoner

Gleason and others' No. 1 McHenry, NW cor. SW Section 29-18-15, was dry and abandoned at 1,337 feet. Stansbury's No. 4 Drew, CSL SE NE Section 26-18-15, was dry and abandoned at 1,107 feet. B. G. Goble's No. 1 Lovett, CSL NE SW Section 35-18-15, had 500 feet of oil in the hole from sand at 1,011-19 feet. It will be shot.

Tulsa Drilling Co.'s No. 1 Evaline, SW NW SW Section 14-18-17, Wagoner County, was dry and abandoned at 610 feet.

G. E. Cahill's No. 1 Tiger, C N half SE NW Section 2-17-15, Coweta district, got sand at 1,065-83 feet. It was given a 50-quart shot and the well made 250 bbls. in 24 hours. Machine is in for No. 2 Cahill, NW SE NW Section 2.

McIntire's No. 2 Tiger, CSL NE NW Section 2-17-15, flowed 240 bbls. in 24 hours, following a shot at 1,071-92 feet. No. 3 Tiger, SW NE NW Section 2-17-15, is drilling below 600 feet.

Vandeventer and others' No. 1 Frank, C NE SW Section 22-16-14, was dry and abandoned at 2,317 feet. Wilcox sand was drilled at 2,265-78 feet. It showed a little oil and a hole full of water.

Mack Drilling Co. was below 700 feet in No. 8 Richards, SE NE SW NW Section 34-16-15.

Beckham County

Mid-Texas Co. was moving in a machine to pull the 6-inch pipe from No. 1 Sidell, SE SW SW Section 17-9-22w, Beckham County, which has been shut down since January, 1931, at 2,550 feet. There are four wells actively drilling in Beckham County, among them Phillips Petroleum Co. and Ramsey Petroleum Co.'s deep test, No. 1 Martin, C NW NE Section 27-9-23w, which got the top of the big lime at 2,050 feet; top of the dolomite at 2,605 feet and was drilling at 3,524 feet.

Southern Fields

Cooper and others' No. 5 Hallum, C N half SE SW Section 3-3-10w, Comanche County, was abandoned as dry at 1,440 feet.

Southern Oil Co.'s No. 5 Seay (twin well), SW SE NW SE Section 3-7-5w, Jefferson County, had sand at 1,080-1,102 feet. It is estimated as a 50-bbl. well. It will be put on the pump. No. 6 Seay is being rigged up.

Kingston Oil & Gas Co. had machine in for No. 4 Adams D, SE NE SE SW Section 31-7s-6, Major County.

Neff and others' No. 3 Dilley, NW SE SE Section 30-5s-6, Major County, was abandoned at 700 feet.

George Pace and others completed No. 1-A Duncan, in the NW NE Section 28-2s-7w, Stephens County, as a 30-bbl. well, sand at 1,692-95 feet.

Skelly Oil Co.'s No. 1 Westheimer, SE NE SW Section 7-2s-2w, Carter County, was being rigged up to pump. It flowed 58 bbls. on its last test, total depth 2,781 feet.

Carter Oil Co.'s No. 1 Perkins, C SW NW SW Section 3-1s-3w, Tussey Pool, Carter County, flowed 520 bbls. in 24 hours through tubing. Total depth is 3,-052 feet, in the Springer shale. The oil is coming from a series of sands from 2,700 feet to 2,816 feet.

Samedan Oil Co.'s No. 1-A Curtis-Gorman, SE NE NE Section 25-1s-3w, was completed as a 30-bbl. well, total depth 2,484 feet.

Kansas Fields

(Continued from Page 48)

Olson and Skelly Oil Co.'s No. 1 Emery, C SW NW Section 22-25-6w, had rotary tools in, and Regina Oil & Gas Co. has derrick up for No. 1 Wilson, NW NE Section 26-25-5w.

Watchorn Oil & Gas Co.'s No. 1 Soper, C NE NE Section 31-25-4w, found the base of the Mississippi lime at 3,870 feet, and set 9-inch casing at 3,950 feet, and standard tools were being rigged up.

Olson and Shell Petroleum Corp. have abandoned their No. 1 Querfeld, C SW SE Section 27-23-4w, in eastern Reno County. It had a hole full of water from Hunton lime at a total depth of 3,965 feet.

Sumner and Cowley Counties

Deal and others were rigging up No. 1 Kelly, NW cor. SW Section 2-33-2, Sumner County.

Roth & Faurot's No. 2 Smiley, NE SE NW Section 12-32-4, Winfield Pool, Cowley County, pumped 40 bbls. in 24 hours. It will be acidized. Five-inch casing was set at 2,540 feet and total depth is 2,566 feet.

Sinclair Prairie Oil Co.'s No. 1-B Dibbins, SE NW NE Section 22-32-4, was drilled deeper from 3,253 feet to 3,291 feet. The well pumped 38 bbls. of oil and 90 bbls. of water.

Kingman County

Skelly Oil Co.'s No. 1 Ratcliffe, CEL NW Section 30-27-10w, Kingman County, got Lansing lime at 3,382 feet and first oil at 3,425 feet, total depth 3,436 feet. It flowed 12½ bbls. per hour and 5,000,000 feet of gas per day.

Sedgwick County

Vickers and others are rigged up to drill deeper in No. 3 Keys, SW NW NE Section 30-27-2e, Sedgwick County. Old total depth was 3,242 feet.

Skelly Oil Co. and Solar Oil Co. have rig up for No. 15 Wilson, C SW NE Section 1-26-1w.

Shell Petroleum Corp.'s No. 7 Lygrisse A, SW NE NE Section 15-26-2, Greenwich district, has 700 feet of oil in the hole from Viola lime at 3,163 feet, drilled in 2 feet.

Greenwood County

Cross & Fueld's No. 2 Mason, CWL E half NW SW Section 14-25-13, Greenwood County, is a location.

Sheedy and others' No. 2 Barriard, SW cor. NW Section 14-25-13, was shot with 60 quarts at 1,500-33 feet and pumped 35 bbls. the first day.

Ward McGinnis has made a location for No. 2 Beal, SW cor. Section 28-23-11.

Plans for Resurveys and Deep Sand Tests Under Way in North Louisiana and Arkansas Fields

By D. H. BANCROFT
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Sept. 11.—So far as completions and new work are concerned there was little of interest in this territory during the week, but arrangements are under way for tests of deep sands. Half a dozen major companies are arranging to ship in a diamond core outfit for a series of tests to 4,000 feet or below. Also it is understood that geophysical crews will be brought in for a thorough resurvey of the whole North Louisiana-Arkansas territory from El Dorado and Camden on the north to Alexandria on the south. The probability is that the instrument used will be the seismograph and the idea is to resurvey all fault line territory and the half dozen or more known interior salt domes.

There were only five completions, three of them dry holes. Cummings Oil Co. completed No. 1 T. M. Phillips, SE NE Section 15-7-11, Zwolle district, Sabine Parish, flowing 100 bbls. from 2,429 feet. Century Carbon Co.'s No. 3 McGee, Section 10-18-4, Ouachita Parish, completed at 2,212 feet, gauged 255,000 feet; rock pressure 620 pounds. H. G. Sampson's No. 1 Barnes & Sullivan, the deep test in Section 12-21-7, Moorehouse Parish, Monroe Field, which was scheduled to go to 3,525 feet, got salt water and was abandoned at 3,853 feet. E. M. Self's No. 1 G. I. Paul, NE SW Section 9-9-13, Converse district of Sabine Parish, was dry and abandoned at 1,933 feet. In Cullman County, Alabama, C. V. Carey abandoned No. 1 King, NE NW Section 35-8-4, in the Knox dolomite at 2,200 feet.

Six Louisiana Locations

Of 12 locations, 6 were in Louisiana, 1 in Arkansas, 1 in East Texas border country, and 4 in Mississippi. Two of the Louisiana locations were in Converse, three in Zwolle, one in the Sugar Creek district of Caliborne Parish, and the others were, one in Union County, Arkansas; one in Cass County, Texas; one in Rankin County, and one in Hinds County of the Jackson gas field in Mississippi; one in Simpson County, and one in Winston County, Mississippi. These were: United Gas Public Service Co.'s No. 2 Tony Durritt, Section 5-19-5, Claiborne Parish; Evans Brothers' No. 2 Cranford, SW SE Section 20-9-13, Converse district, Sabine Parish, began drilling August 28, cemented 10-inch at 42 feet, and drilling at 1,120 feet; W. F. Lacy's No. 1 Bowman-Hicks, NW SW Section 23-9-13, is rigging up; Barrett & Read have derrick up for No. 1 Dew, SW SE Section 22-8-11, Zwolle; Conrad Oil Co. drove stakes for No. 1 T. L. Andries, NW SE Section 15-7-11, Zwolle, and for No. 2 on the same lease. E. R. Henderson began drilling No. 1 J. H. Ogden, SW SE Section 32-18-14, Union County, Arkansas, and has 10-inch cemented at 135 feet. R. Kamon's No. 1 Cagle is a location in the approximate center of the Allday 80-acre tract in the H. Cunningham Survey of Cass County, Texas, in the middle of a 6,000-acre block and is scheduled to go 3,800 feet. Roger G. James and others have rig up for No. 1 Warner, in the SW SE Section 13-5-1e, Rankin County, Mississippi, and Beavy Corp. has a derrick up for No. 1 Beavy, in the C SW Section 33-2n-4e, Simpson County. Hedrick-Camp Drilling Co. has derrick up in the NW NW Section 12-13-11, Winston County, for No. 1 Watkins. Atkins and Hightower began drilling No. 1 Overstreet, SW NE Section 26-6-1e, Hinds County, set 10-inch at 752 feet and were drilling at 1,300 feet.

NORTH LOUISIANA

W. D. Ball's Hicks Grocery Co., NE NW Section 18-16-11, on the fringe of Elm Grove, Bossier Parish, took a saturated core at 1,416 feet. H. I. Morgan's No. 2 Smith, Section 22-19-11, Bellvue district of Bossier, was drilling lime at 5,620 feet. B. A. Sherrell, trustee's No. 1 fee, NW NW Section 18-19-11, cored gray sandy shale at 2,173 feet and was arranging to make a drill stem test.

The Arkansas-Louisiana Pipe Line Co. appears to be off structure with No. 1 Williams and Windham, NE NW Section 4-22-16, Rhodesa deep gas district of Caddo Parish, drilling lime at 5,950 feet, approximately 400 feet deeper than the producing gas wells within a short distance north without having a show anywhere along the log. Seven-inch casing was cemented at 5,517 feet, one of the longest strings of pipe that has been set in this territory. C. G. Gibbons cored sandy shale with a show of oil at 1,804 feet on No. 1 Burglass Oil & Gas Co., NE NE Section 15-21-16, in the Lewis sector of the old Caddo Field and is arranging for a drill stem test. This will be the first test in this horizon so far as known, all previous wells in the last 20 years having gone through it and set casing on the cap around 1,850 feet. McAnney & Byrd, trustees, cored sand with a slight show of gas and oil at around 1,000 feet on No. 1 Lawhon-Bogan, Linwood Park, SE NW Section 12-14-16, 8 miles south of Shreveport, and about a mile west of the old Cedar Grove gas field.

Terrell & Price have gone back on No. 1 Louisiana Central Lumber Co., NW NE Section 18-11-3e, Caldwell Parish, reported six weeks ago as dry and abandoned at 1,403 feet, and are moving in a rotary rig to go deeper. George Greer and others cemented 6-inch at 1,105 feet, plugged back to 915 feet after testing an estimated 500,000 feet of gas at 913 feet, cored to 926 feet and got salt water.

E. T. Oakes bailed dry without a show on No. 1 Bryant and others, Section 30-13-15, DeSoto Parish, the Longstreet deep test that has been holding attention for the last eight months, and was arranging to core; total depth 4,614 feet. Marr & Collins started their East Carroll gas district wildcat, No. 1 Desha Lumber Co., Section 42-21-12, and cemented 10-inch at 300 feet. Guy Cox and others have rig up for No. 1 Lewis, NW NE Section 8-6-1e, Grant Parish. Grant Minerals Trust's No. 1 Cameron, SW NW Section 26-7-3, is drilling at 670 feet after a month of inactivity. E. M. Thomason tested salt water at 1,740 feet on No. 1 T. J. Crichton, SW SE Section 17-13-10, Red River Parish, and is shut down for orders.

Helena Oil & Gas Co.'s No. 1 Jackson, SW SW Section 10-9-13, Converse district, Sabine Parish, was drilling at 1,340 feet. Lambert and others were arranging to bail No. 1 Edwards, SW NW Section 29-9-13, after a shot of acid at 2,000 feet, old total depth 3,360 feet. H. C. Lessinger apparently has missed the pay with No. 1 Bowman-Hicks, NW NW Section 13-9-13, which is drilling at 3,200 feet without a show. Joe Modissette's No. 3 Frost-Johnson, NE SW Section 16-9-13, appears to be in the same case, drilling at 3,860 feet after one test with a small show of gas at 3,040 feet. C. L. Nixon is arranging to run 2-inch tubing and packer in No. 1 Patrick, NE SW Section 21-9-13, which was standing 1,500 feet in oil, total depth 1,600 feet. Sabine Royalties Co. cemented 8¼-inch at 1,574 feet, and is arranging to use acid, total depth 2,008 feet.

ARKANSAS

Three wells in Arkansas were sufficiently interesting to deserve space. Duluth-Arkansas Oil Co.'s No. 2 Beck, SE SW Section 34-15-26, Miller County, was drilling at 910 feet after a two weeks' shutdown. J. D. Reynold's No. 1 Snow Hill Baptist Church, SE SW Section 28-15-15, Smackover, Ouachita County, was fishing for a bit at 1,559 feet. Wilson and Chapman's No. 1-B Hadley, Section 3-18-13, Urbana district, Union County, an old well drilling deeper, was drilling at 3,615 feet, corrected depth.

MISSISSIPPI

Eastman-Gardiner Interest's No. 1 Eastman-Gardiner, NE NW Section 29-9-16, Covington County, temporarily abandoned last February at 3,595 feet, was drilling Cretaceous chalk at 6,683 feet. This is one of the deepest holes yet drilled in Mississippi, and while it may be a failure so far as production is concerned, it will furnish much information for the geologists, paleontologists and others interested in the future of southern Mississippi as an oil-producing territory. Snow-Block Petroleum Co. was drilling in the Wilcox at 3,250 feet on No. 1 Watson estate, NE SW Section 24-7-13, Jones County. Lamar Oil Co.'s No. 1 Scott, NE NE Section 18-2n-14, Lamar County, is shut down waiting for a string of 6⅝-inch casing to set at around 3,000 feet. Love Petroleum Co. is arranging to cement 5⅛-inch at 3,600 feet on No. 2 Interior Lumber Co., NW NW Section 28-6-2e, Rankin County, a Jackson gas field wildcat. This is another of the deep tests being drilled in Mississippi. P. J. McAlpine has temporarily abandoned No. 1 Hensely, Section 15-21-11, Webster County, at 1,800 feet in the Tuscaloosa.

ALABAMA-FLORIDA

In Escambia County, Alabama, Escambia Oil Co.'s No. 1 State Line Lumber Co., NE NW Section 24-1n-10, was drilling sandy shale at 5,194 feet, another deep test. DeSoto Oil & Gas Corp.'s No. 1 Gardner, Section 22-15-16, Lamar County, was in red clay at 4,100 feet. Ray L. Estabrook and others' No. 1 Walton Land & Timber Co., Walton County, Florida, whipstocked casing at 2,300 feet to test a reported show of oil at 2,600-75 feet, total depth 5,250 feet.

Daily average runs from the fields totaling 57,005 bbls. were a decrease of 1,010 bbls. from the week before. Louisiana's 25,985 bbls. were a decline of 780 bbls. and Arkansas' 31,020 bbls. were a decline of 230 bbls.

NORTH LOUISIANA

	Bbls.
Caddo, light	4,610
Caddo, heavy	1,490
Converse	370
Cotton Valley	465
DeSoto-Red River	1,600
Elm Grove	325
Haynesville	3,350
Holly	190
Homer	2,690
Pleasant Hill	255
Sarepta-Cartorville	730
Urania	2,580
Zwolle	6,780
Total this week	25,985
Total last week	26,765
Decrease	780

ARKANSAS

Champagnolle	1,285
El Dorado	2,560
Lisbon	395
Miller County	50
Nevada	625
Smackover, light	2,565
Smackover, heavy	21,500
Stephens	620
Urbana	1,420
Total this week	31,020
Total last week	31,250
Decrease	230
Both States	57,005
Last week	58,015
Decrease	1,010

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

North Louisiana

BIENVILLE PARISH

Company, well, farm name, section and block—	Remarks:
Poole & Johnson's No. 1 H. E. Sudduth, 1,176 ft. E and S, C Sec. 28-14-10	Derrick.

BOSSIER PARISH

J. A. King et al's (was A. W. Phillips, tr.'s) No. 1 Oden, 300 ft. W, 150 ft. N, SE cor. NW NW Sec. 4-19-13	S.D. 1,704 ft.
W. D. Ball's Hicks Grocery Co. (was Dr. C. R. Reed, tr.'s) No. 1 C.J.&B., Sec. 18-16-11	Drlg. chalk 1,060 ft.
B. A. Sherrell, tr.'s No. 1 fee, NE NW NW Sec. 18-19-11	Coring 2,113 ft.

CADDO PARISH

J. B. Hutchinson, tr.'s No. 1 Story Phillips, 330 ft. N and E, SW cor. SW NE SE Sec. 28-16-13	Arranging to cmt. 8-in. 1,040 ft.
J. T. Humphrey et al's No. 1 Powell, 330 ft. N and E, SW cor. NW SE Section 14-19-15	Began drlg. Aug. 27; 10-in. 105 ft.
John F. Kerper's No. 1 Barron, 350 ft. N and W, SE cor. NE SE Sec. 27-16-14	Fishing for junk 2,703 ft.
A. D. King, tr.'s No. 1 Roach, 641 ft. E, 375 ft. N, SW cor. SW SW Sec. 4-14-16	Began drlg. Aug. 10; 10-in. 226 ft.

CATAHOULA PARISH

Geo. Greer et al's No. 2 La. Central Lbr. Co., 775 ft. E, 280 ft. S, NW cor. NE NE Sec. 2-9-6	Began drlg. Aug. 21; drlg. 100 ft.

DE SOTO PARISH

Bailey Gantz et al's No. 1 Jenkins, NW cor. SE SW Sec. 35-13-13	Moving in heavy rig; T.D. 3,-890 ft.
J. H. McKenzie's (was P. B. Dyer's) No. 2 B. F. Jenkins, 330 ft. N and E, SW cor. NW SW Sec. 35-15-13	Cmtd. 6-in. 2,430 ft.

(Continued on Page 60)

New Field and Trend Opened in Duval County; Continued Activity in Starr County District

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Field

SAN ANTONIO, Tex., Sept. 11.—Conway and Campbell opened a new field and a new trend in Duval County when they completed No. 1 Hoffman in Survey No. 114 about 5 miles southeast of the Sarnosa Pool in Government Wells sand at 2,749-56 feet for an estimated 30,000,000 to 50,000,000 feet of dry gas daily. The well came in Saturday and the estimate of production was before the well had thoroughly cleaned itself.

It is east of the line of production in the Government Wells, Kohler and East Cole chain of pools and the only production east of that line except the three wells in the Driscoll Pool, 15 miles to the south and 12 miles east of the East Cole Pool. There was an odor of oil to the core taken before casing was set but up to last available reports the well has not shown oil.

This well is on acreage out of a block of leases taken some time ago by Plymouth Oil Co. and on which Plymouth drilled two tests, both to below 3,500 feet, one of them about a mile east of the Conway & Campbell well and the other 1½ miles east and a little south. Exact location of Conway & Campbell's No. 1 Hoffman is 300 feet from the northwest line and 1,650 feet from the northeast line of Sophie Hoffman Survey No. 114, about 20 miles due west of San Diego.

At this time there are two deals along that general line of play. Eaton and others' No. 1 Herbst is 7 miles northeast in S.A.&M.G. Ry. Co. Survey No. 71, on a block in which Continental Oil Co. owns a big interest. It has completed a water well preparatory to spudding in. The other is S.S.&H. Oil Co.'s No. 1 Hunter in Survey No. 515, 3 miles east and a mile north of the Eaton test. It is standing at 1,930 feet.

North Pettus Producer

Magnolia Petroleum Co.'s No. 1 Porter-State in Karnes County, 698 feet east of nearest production in the North Pettus Pool, came in from sand at 3,684-93 feet producing 150 bbls. the first 12 hours but later came up to 385 bbls. in 24 hours on small choke. This is the best well in the pool and is thought by some to indicate a considerable extension of the pool to the east with the Magnolia holding the acreage for more than a mile to the east.

The North Pettus Field was discovered a few years ago at about the same time that the Porter Pool, 3 miles south, was discovered. The first wells were over the line in Bee County and were not so large, production being in the same sand Magnolia's No. 1 Porter State is producing from. Magnolia first entered the field recently and drilled No. 1 Porter completed at 3,660 feet for about 150 bbls. and No. 1 Porter-State is on a wedge-shaped vacancy strip between the Brooks and Burleson Survey on the east and the Spencer Morris Survey on the west and is not shown on some maps. The strip is only 65 feet wide at the point where the well is located. It is 1,650 feet from the south line of the Brooks & Burleson Survey and a few feet from the west line of what most maps show as the west line of that survey, and is 698 feet east of No. 1 Porter in the Spencer Morris Survey. Begol Oil Co., on a Gulf Coast Oil Co. lease, recently completed No. 6 McKinley for 150 bbls. 600 feet west of Magnolia's No. 1 Porter, making four producing oil wells, one gas well and one dry hole on the lease. United Production Co. has two oil wells and one dry hole on the south, there being eight producing oil wells in the field at this time.

Starr County Development

Sun Oil Co.'s No. 2-A Guerra, about a half mile southeast of the company's discovery, No. 1-A Guerra, in northwestern Starr County, came in for 40 bbls. the first 11 hours, in sand at 2,218-39 feet, with casing set at 2,212 feet. It is the third producer in the new field. No. 1-A Guerra when opened makes about 17,000,000 feet of gas daily and 15 bbls. of high gravity oil hourly. No. 1-C Guerra, about 3,400 feet south of it, is a gas well. No. 1-B Guerra, about 3,400 feet north of No. 1-A Guerra, is a dry hole, and No. 3-A Guerra, 3,000 feet southeast of No. 1-C Guerra, was on the sand at about the same depth as the other wells late in the week and due to set casing.

Pools elsewhere in the vicinity of the Reynosa escarpment follow the general direction of the escarpment and hence in this district in northwestern Starr County the trend is naturally expected to be somewhat west of north and east of south. The new pool of the Sun company hasn't yet developed enough to give definite indication what it will do but it can easily develop a good sized pool between the dry hole on the north and the gas well on the south.

W. A. Smith has a location a mile west of the discovery well but has not started yet and 7 miles northwest in Jim Hogg County Scarp Oil Co.'s (DeWitt C. DeWitt) No. 1 Lopez is now down about 1,900 feet and drilling.

Other operations in Starr County have lagged except around Jeffries-Lambeth's No. 1 Starr County Cattle Co., 9 miles northeast of Rio Grande City, that recently came in a gasser opening a new pool. Shankle and others' No. 1 Garcia, a mile north and a little east, is below 1,600 feet and drilling. Some other tests scattered around that part of the country are rigging up and getting ready to start.

In the southwestern corner of Hidalgo County Chancellor and Hall's No. 1 Garcia while waiting for casing took a drill stem test and get 28 thribbles of salt water and oil and 3 thribbles of oil from sand at 3,179-87 feet. They will probably figure out some way to cut out the water and go ahead and set the casing.

Williamson County Prospect

Over the week end scouts from over Southwest Texas were assembled in Williamson County, 8 miles southeast of Taylor, to see a test made of Fritz Fuchs' No. 1 Zischang at 870 feet in Serpentine, looking like the opening of a new Serpentine pool. Fritz Fuchs discovered the Thrall Field more than 20 years ago, the first field producing from Serpentine formation.

Laredo District

The hurricane that swept over Southwest Texas the first of last week greatly delayed all outdoors work. It amounted to taking two days out and in some instances more than two days. Besides that Monday was Labor Day and time out. There were no "out of the ordinary" completions or developments other than these noted, but at the close of the week there were a number of tests in the North Government Wells Pool with casing set and ready to drill in.

McMullen County

In southern McMullen County McDowell and Vierson's No. 1 Jefferson in Survey No. 92 on acreage secured from Darby Oil Co., proved a dry hole and was abandoned at 2,502 feet. It is one of the wildcat tests in the Government Wells trend that has been watched and the abandonment of S. R. & C. Oil Co. and Sinclair Prairie Oil Co.'s No. 1 Reeves, shortly before, leaves that trend empty of tests in southern McMullen County. No. 1 Jefferson was 15 miles northeast of North Government Wells and S. R. & C. Oil Co.'s No. 1 Reeves 18 miles northeast of North Government Wells.

In that trend in northern Duval County, DeSoto Oil Co.'s No. 2 Wood-Welder in Survey 211, 2½ miles northeast of North Government Wells, plugged back from 2,500 to 2,156 feet, the Government Wells sand, and is trying to make a well. No. 1, located 660 feet east of it, made a gas well at that depth. O. W. Killam, another mile north, is below 1,800 feet in his No. 1 Wood-Welder.

S. R. & C. Oil Co., after many months of inactivity in the S. R. C. Pool, several miles northwest of North Government Wells Pool, drilled No. 9 Duval County Ranch Co. and at 1,749-54 feet got a 150-bbl. well, one of the best in the field which consists of only a few wells.

Balcones Fault Zone

C. J. Webster Oil & Gas Co.'s No. 1 Fulps, in Caldwell County between the Dale Field on the northeast and the old Luling Field on the southwest, was coring over the week end to find the top of the chalk. At the last reported depth it was thought to be in the chalk and if the core proved it the test would be running about 100 feet high as compared with Webster's No. 1-A McCrory, a crevice producing well a little west of it.

Bastrop County

Operations have not been quite so spirited in Bastrop County lately. Treatment of some chalk wells in the North Dale Field with acid failed to bring much improvement and there have been no additional completions. Joe Mills has casing set in his No. 1 Voss north of the Martz & Beavens wells in the new Cedar Creek Field but had not drilled in at last reports and the two Edwards lime tests to be drilled in Guadalupe are still locations.

In Bexar County Boler's No. 1 Kearney has finally been abandoned at 1,472 feet with a last core taken that would carry it a little past that depth. The company will move to No. 1 Milburn about a quarter of a mile west. No. 1 Kearney had a good looking core from the Edwards lime and looked for a time like the opening of a new pool. It is now thought that it is an east edge well and by moving west a test ought to go into production.

Wildcat Operations in Southwest Texas

Week Ending September 9

Company, well, farm name, section and block—	Remarks:
ATASCOSA COUNTY	
E. C. Burton's No. 1 Smith-Mowinkle, 2,100 ft. from N line, 300 ft. from W line of F. Peres Sur. No. 172.	T.D. 690 ft.; standing.
BASTROP COUNTY	
J. E. Emanuel's No. 1 H. Klemm, 317 ft. from W line, 300 ft. from S line of tract in R. S. Teal Sur.	T.D. 250 ft; standing.
Ca-Tex O. & G. Dev. Corp.'s No. 1 Pendergrass, 1,343 ft. from NE, 310 ft. from SE line of 130-ac. tract in Henry Warnell Sur.	Rigged up and S.D.
Three Oil Co.'s No. 1 M. Ingram, 1,350 ft. from SW line, 940 ft. from SE line of tract in M. Morgan Sur.	Derrick.
BEE COUNTY	
Grisham et al's No. 1 Powell, 900 ft. N, 500 ft. W of SE cor. of J. A. Reed Sur.	Spudded in.
Holland Oil Co.'s No. 1 Copeland, NE cor. of 400-ac. tract in Pace Sur.	Moving in heavier machinery.
BELL COUNTY	
Gus Winston et al's No. 2 Warrick, 100 ft. N of James Scoggins' No. 1 Warrick, in Elijah Ingram Sur.	T.D. 1,046 ft.; standing.
R. S. Wilson's No. 1 Davenport, 200 ft. from W line, 700 ft. from S line of J. L. Herred Sur.	T.D. 1,062 ft.; standing.
BEXAR COUNTY	
O. N. Beer's No. 1 S. W. Kearney, 150 ft. from S and E lines of 33-ac. tract in S. C. I. Peres Sur.	T.D. 1,472 ft.; bailing.
A. M. Blume's No. 1 Ridder, 300 ft. from W line, 1,000 ft. from N line of tract in Sur. No. 55, County Blk. 1,596	T.D. 581 ft.; drlg.
F. J. Von Delden et al's No. 1 Frank Webber, 150 acres in J. Montes No. 6	T.D. 40 ft.; spudded in and S.D.
I. L. Dingman's No. 2 Cassin Estate, 175 ft. from N line, 215 ft. from W line of 1,250-ac. tract in Rodriquez Sur.	T.D. 285 ft.; drlg.
Dingman's No. 1 Cassin, 175 ft. from N, 120 ft. from W line of 1,250-ac. tract in Rodriquez Sur.	T.D. 1,479 ft.; top Edwards; coring; tested sulphur wtr.
Austin Hull's No. 1 Classen, 368 ft. from W line, 2,500 ft. from S line of tract, 12 miles N of San Antonio.	T.D. 1,810 ft; trying to run csg.
LaSalle Oil Co.'s No. 1 City Sewage farm, 150 ft. S of Rilling Road, 450 ft. W of NE cor. of tract in D. Bustillos Sur.	T.D. 75 ft.; drlg.
C. J. LeCompte's No. 3 R. Diaz, 150 ft. from S and E lines of 30-ac. tract, Diaz farm lots, Nos. 1 and 2.	T.D. 1,450 ft.; drlg.
C. J. LeCompte's No. 4 R. Diaz, 324 ft. NE of No. 1.	T.D. 320 ft.; S.D.
Motes-Campbell's No. 1 Pruitt, 550 ft. NE of Trussells' No. 1 Pruitt, 54 varas from E line of tract in Samuel McCullough Sur.	T.D. 1,065 ft.; S.D.
Motes-Campbell's No. 1 Stumberg, 990 ft. from N line, 450 ft. from W line of F. Rolen Sur. No. 48	T.D. 1,135 ft.; bailing and pumping.
Motes-Campbell's No. 2 Stumberg, 450 ft. from N line, 450 ft. from W line of S. Stumberg 140-ac. tract in F. Rolen Sur. No. 48	T.D. 445 ft.; drlg. shale.
George L. O'Neill's No. 1 Neimann in Juan Montes Sur. No. 6	T.D. 347 ft.; drlg.
Fred Perrenot's No. 1 Ruiz, SE cor. of 83-ac. tract in F. Rowland (Rolen) Sur. No. 48	T.D. 600 ft.; to set 8-in. csg.
H. A. Pagenkopf's No. 1 G. A. Goeth, 500 ft. from SE line, 400 ft. from SW line which is San Antonio River, Juan Montes Sur.	T.D. 1,371 ft.; drlg. hard Taylor.
Fred A. Perrenot's No. 1 Russell, 750 varas from NE line, 54 varas from NW line of 500-ac. tract in Rodriquez Sur.	T.D. 1,315 ft.; standing.

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New Salt Dome Prospect in Jefferson County; New Operations in Greta and Thompson

By W. A. SPINNEY
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Sept. 11.—Another new salt dome prospect in the Gulf Coast district was looking promising the latter part of the week, indicating the possibility of opening a new producing area. This was southeast of Nome, Jefferson County, where Sun Oil Co. and Shell Petroleum Corp.'s No. 1 Paggi, T.& N.O. Survey, Section 32, in a drill stem test, made one fourble and two joints of cut oil and one fourble of pipe line oil through a one-half inch choke with the tool open 31 minutes. The oil tested 31.5 degrees at 98 degrees temperature and 29.2 gravity corrected. The showing of oil was found in sand at 6,003-23 feet.

This test which may open a new field started spudding in June and made good drilling time, taking about 90 days. Part of this time the test was shut down on account of high water. It is the first test in the area. It is in the northwest corner of the county, 1 mile southeast of the Sour Lake Field, 15 miles west of Beaumont and Spindletop and about 10 miles east of the Hull Field.

The test was drilled on a block of acreage consisting of 10,000 acres part of which is owned jointly by Sun Oil Co. and the Shell Petroleum Corp., and the remainder by Sun Oil Co. alone.

The prospect was checked by the use of a seismograph, torsion balance and reflection machines, the acreage being assembled about two years ago. The area surrounding the well has long been considered favorable.

The Texas Railroad Commission ordered that the allowable in all fields in the State be reduced 25 per cent and marginal wells be left untouched. In the Gulf Coast this reduced output affects particularly such pools as Conroe, Greta, Barbers Hill and Thompson, which are producing more than 10,000 bbls. daily and are yielding the largest quantity of crude in the district at this time.

Although production in the Gulf Coast area has not been profitable under the old prices it reached a new peak during the past few weeks. The Texas Coast reached a total of 218,000 bbls. daily last week and the Louisiana Coast area produced around 46,200 bbls. daily giving the entire Gulf Coast area a combined production of 264,200 bbls. daily.

The activity in the Gulf Coast area has been in the newer areas but since the price has reached the $1 mark the areas surrounding the older domes will become more active.

Greta Field

Three new wells were added to the Greta Field in Refugio County during the week with a combined production of 1,575 bbls. daily. The daily production from the field for the seven days ending September 8 averaged 8,700 bbls. A hearing on the production from this field is to be held at the Rice Hotel in Houston on September 15. The deepest drilling test in the Greta Field is Nesral Oil Co.'s No. 2 Wilson Heard, M. J. Ximenes Survey, which was drilling at 5,300 feet on the last report. It missed the Greta pay sand which is found at approximately 4,400 feet in all of the present producing wells. This test is on the east edge of the producing area and defines the eastern rim of production.

The completed wells include Circle W Oil Co.'s No. 1 O'Brien, E. H. Winfield Survey, with an initial production of 700 bbls. through a one-quarter inch choke from sand at 4,343-96 feet. This well extended the production a half mile to the west. It will force a number of offset locations to be drilled. Blanco Oil Co.'s No. 2 J. J. O'Brien, E. H. Winfield Survey, made 575 bbls. of pipe line oil through a one-quarter inch choke from sand at 4,357-99 feet. This well also extended the producing area a location to the south and east. Nesral Oil Co.'s No. 1 O'Connor, N. S. Crunk Survey, was completed for 300 bbls. of pipe line oil from sand at 4,353-91 feet. It was a quarter of a mile extension directly south. All of these wells indicate this pool will cover a large territory as the pay sand was found at approximately the same level in all of the wells.

A large number of new operations are expected from the operators in this field as the result of these completions and as soon as the commission's hearing is over.

Thompson Field

Humble Oil & Refining Co. and Gulf Production Co. announced five new operations for Thompson Field in Fort Bend County. These tests are among the producing wells and give this field further importance as a consistent producing area. The Thompson Field has been producing around 16,000 bbls. daily and is expected to be restricted to approximately 12,000 bbls. daily under the Railroad Commission's new orders. The proration hearing that was to be held in Houston at the Rice Hotel on September 11, in regard to restricting production in the Thompson Field, has been postponed until more data can be assembled.

Colorado County

The completion of another dry hole in the Garwood area of southern Colorado County adds the fifth test to that field, of which one was a gas well, one made some oil for a short time and was abandoned, and the others were dry holes. The discovery gas well was completed in a sand at 4,021-25 feet and the oil in the other well was found in sand at 6,200 feet.

A new location has been announced by the Humble Oil & Refining Co. for its No. 1 C. Powell, southwest of the discovery well, which is expected to indicate the location of the structure. This test is east and a little south of Plymouth Oil Co.'s No. 1 Ream, the only test that has made oil in the Garwood area. All of the tests have found the sand at approximately the same depth, indicating the sand is present over a large area.

About six months ago the Gulf Production Co. obtained options on a large number of acres scattered all over Colorado County, and it now is making selections of these options, leasing the acreage in terms of five-year leases, the balance of the acreage being surrendered.

Tomball Field

The Tomball Field in Harris County continues to be a doubtful area as the latest well to be completed there is Humble Oil & Refining Co.'s No. 1 Bloecher, in the J. N. Hooper Survey. It made a production test during the week, making 134 bbls. of pipe line oil a day through a quarter-inch choke from 4 feet of sand at 5,576-80 feet. The well is now being worked over.

The next test expected to give some indication of where the production in the field is located is Humble Oil & Refining Co.'s No. 1 Gebhart, a mile southeast of the field in William Perkins Survey, which was drilling at 5,992 feet on the last report after finding water in the pay horizon below 5,600 feet. This was considered one of the important wells and will determine the future drilling activities to the southeast from the discovery well. It is below the depth of where the oil was expected. Humble Oil & Refining Co.'s No. 2 B. F. Fredericks, in J. M. Hooper Survey, is a new location north and east from the discovery well. The same company's No. 1 C. F. Henricks, William Hurd Survey, is nearing the depth of the oil zone. It was drilling at 5,305 feet at latest report.

There are now six completed oil wells and three gas wells, five tests drilling and three derricks in the Tomball Field.

Conroe Field

With a steady number of completions in the Conroe Field in Montgomery County each week it was believed to be only a short time until the daily production would reach 100,000 bbls. daily, but with the recent announcement that production in all fields would be reduced 25 per cent, in all probability this field will not reach that mark.

Wells in the field are still of average size. Sun Oil Co.'s No. 11 Foster, J. Bricker Survey, is the deepest test yet drilled in Conroe. It reached a total depth of 6,364 feet and was abandoned during the week. It is in the south end of the field and definitely indicates the southern limits of production at Conroe. It was also dry in the regular Conroe sand and was drilled deeper in search of another pay horizon.

Liberty County

An interesting well was completed in the Hull Field in Liberty County during the week in the southeast side of the field and southeast of production. It is the second well in this new area. It is Miramar Oil Corp.'s No. 2 Phoenix, it. Jesse Devore Survey. It made 900 bbls. of pipe line oil through a eleven-thirty-seconds inch choke from a total depth of 4,500 feet. This in the second well in this part of the field and is in new territory. The Hull Dome is one of the older domes on which production has been found in sand overlying the dome, in the cap rock, in the flanking sands which are found productive all the way around the dome. It is one of the few salt domes in the Gulf Coast district that has proved productive the entire way around the dome from the flanking sands. The same company drilled the discovery well on this part of the dome.

Hankamer

At Hankamer, Liberty County, Gulf Production Co.'s No. 2 Crowe and Jacobs, H.&T.C. Survey, Section 21, was showing oil and gas at 5,281 feet. The company was preparing to make a drill stem test of the oil showing. The test is about 1,500 feet east from the nearest production and if a commercial well is completed at this location it will result in additional drilling.

Wharton County

In the Louise area of Wharton County, 11 tests were drilling without a single well making oil in commercial quantities. Pure Oil Co.'s No. 1 Stewart, Morris and Cummings Survey, Section 25, reached a total depth of 8,067 feet during the week and the drill stem stuck at 6,600 feet. This test found a showing of oil at 5,963-71 feet.

Pure Oil Co.'s No. 1 Charles T. Kuntze, Morris & Cummings Survey, Section 27, about a mile southeast from No. 1 Stewart, is drilling below 6,557 feet. It tested the sand at 6,005-21 feet last week and found water. None of the other drilling tests were deep enough to find any of the pay sands.

At Pledger

Danciger Oil & Refining Co.'s No. 2 Hunt, at Pledger, in Brazoria County, second test in the vicinity to be drilled there, is now shut down at a total depth of 8,053 feet. The first test in the field was a wet gas well, with a pressure of 2,600 pounds at 6,826 feet.

Matagorda County

Continental Oil Co.'s No. 1 Boker, J. W. Criswell Survey, Citrus Grove, Matagorda County, blew out and stuck the drill stem at 6,003 feet. The operators are attempting to kill the flow of gas. It is the second blowout experienced on this prospect. Another test drilled by the Empire Gas & Fuel Co. in 1930 blew out at 6,248-52 feet. This test was drilled to a total depth of 6,460 feet and then abandoned in heaving shale. The top of the heaving shale was found at 6,413 feet. All of these showings of gas are believed to be indications that somewhere in the vicinity oil may be found.

Harris County

Jack Schultz and others' No. 1 West Production Co. in George Dedrick Survey, Harris County wildcat, is estimated to be making 4,000,000 feet of gas from 3,400-14 feet. The well is making some water and the operators are attempting to shut off this water. It is the second gas well found in the vicinity.

Yount Lee Oil Co.'s No. 1 E. W. Boyt, H.&T.C. Survey, Section 17, Liberty County wildcat, deepest test ever drilled on the Gulf Coast, is within 100 feet of 10,000 feet on the last reports. It was drilling in shale at 9,900 feet.

Gulf Coast Fields and Wildcats

Week Ending September 9

DAMON MOUND—BRAZORIA COUNTY

Company, farm and location—	Remarks:
Intercoastal Oil Co.'s No. 11 Wisdom, 350 ft. E of No. 6, Blk. 51, Lot D, A. Durst Sur.	S.G. 1,380-87 ft.
Sinclair Prairie Oil Co.'s No. 31-A Bryan, 155 ft. N, 45 deg. E of SW cor. of Blk. 28, Masterson Subd., and 140 ft. S. 45 deg. E. A. Darst Sur.	T.D. 7,596 ft.; standing.

MANVEL—BRAZORIA COUNTY

Texas Co.'s No. 1 Belcher (W.O.), 157 ft. SE of NW line and 223 ft. NE of SW line of Lot 18, Blk. A, Suburban Gardens Subd, H. N. Little Sur.	T.D. 5,537 ft.; P.B. and sidetracked to 5,456 ft.; swbng.
Texas Co.'s No. 5-A Belcher, S 40 deg. W 3,430 ft., S 48 deg. E 300 ft. from N cor. of "A" lease, H. N. Little Sur.	Rig.
Texas Co.'s No. 6 Belcher, H. N. Little Sur., South 42° W 3,400 ft. and S 42° E 400 ft. from N cor. lease	Coring shale 5,066 ft.
The Texas Co.'s No. 2 Davis, 300 ft. out of S cor. Lot 42, H. N. Little Sur.	T.D. 5,812 ft.; cmtd. back to 3,730 ft.; standing.

(Continued on Page 63)

Colorado Tests Showing Oil and Gas Saturation; New Test in Weld County Is Ready to Spud

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Sept. 11.—The New Mexico Commissioner of Public Lands is offering 101,232 acres for lease at public auction. Two new locations were released in the Artesia area. There were no completions. New oil code allowables for the Rocky Mountain states and prices of gasoline and crude oil in this district came in for extensive discussion. Colorado has two important tests in Moffat County showing oil and gas saturation. Another test in Weld County is ready to spud. Colorado reported no completions or new locations.

There were no completions or new locations reported in Wyoming. One well in Lance Creek is showing water in the Lakota and two wells are ready for completion in the Osage Field.

Montana reported the death of two men at Cut Bank in an explosion. Tarrant will test the Madison lime in the Cut Bank Field in his No. 1 Williams. Test near the Canadian border is showing some oil. One well was abandoned in Carter County and another in Fergus County.

NEW MEXICO

Frank Vesely, commissioner of public lands for New Mexico, will receive bids today at Santa Fe for oil and gas leases on 38 tracts of state land located mostly in Eddy, Lea and Roosevelt Counties in the southeastern part of the state. The tracts vary in size from 200 acres to more than 6,000 acres each and aggregate 101,232.09 acres. Minimum rentals are prescribed for all of the tracts and all bids for leases must be at least the amount of these minimums. Twelve tracts, comprising 39,324 acres, call for a minimum of 10 cents per acre per year and the remainder is about equally divided between minimum rentals of 25 and 50 cents. Some of the tracts offered are in favorably located wildcat territory not far from producing fields.

New Mexico was allotted 41,400 bbls. as its daily allowable outlet under the new oil code. This is practically the amount being run daily at the present time and means no important change in the production figures. Gov. Arthur Seligman appealed to Secretary Ickes to allow New Mexico 150,000 bbls. daily. While the principal pools in the southeastern part of the state are restricting production, the figure named by the governor could not very well be allowed without upsetting the entire balance among the states.

Reports from Douglas, Ariz., state that delay in starting the extension of the Western Pipe Line Co.'s gas line from Douglas to Tucson and Phoenix is threatened by labor leaders insisting upon 60 cents an hour for six-hour days while the pipe line company offered 35 cents an hour. The company recently was granted a loan of $2,200,000 by the Reconstruction Finance Corp. The gas will come from the Jal Pool in Lea County.

Lea County

Cranfill & Reynolds' No. 4 State, C Lot 10, Section 2-21-33, Lea area, is drilling at 3,461 feet in gray lime. It bottomed the salt at 3,420 feet and topped the lime at 3,447 feet.

Carter Oil and Continental Oil companies' No. 1 State, C NE NE Section 28-22-35, South Eunice area, is coring lime at 3,938 feet.

Continental Oil Co.'s No. 2 McCallister 24-A, NW NE NE Section 24-26-36, Jal area, is drilling at 1,505 feet in water sand. Western-Anton's No. 1 Conditt, C SW SW Section 12-25-36, is again delayed at 2,756 feet by water shortage for the rotary.

Eddy County

Two new locations in the Artesia area were released in Flynn, Welch & Yates' No. 67 State, C SW NW Section 10-19-28, and same firm's No. 68 State, C SW NE Section 27-18-28. This firm's No. 66 State, NW SE SE Section 30-18-28, is cleaning out to test at 1,939 feet after shooting with 50 quarts.

I. D. Compton Oil Co. has taken over Price & Son's block and No. 1 State, C NE SW Section 15-16-23, northwest of the town of Artesia, on the Upper Cottonwood and is spudding for a 1,500-foot test. It will be known as No. 6 State. The test spudded 2 feet and shut down under the old management.

C. H. Lockhart and others' No. 2 Root, C SW SW Section 7-17-30, Maljamar area, is shut down at 2,845 feet. It had a show of oil at 2,606-10 feet, which increased at 2,622-24 feet. Grayburg Oil Co.'s No. 4 Burch, C SE NW Section 19-17-30, is drilling at 2,550 feet in lime and had a show of oil at 2,510 feet.

Ralph Spearow and others' No. 1 McClelland, SW NW NE Section 22-22-23, Indian Creek, 25 miles west of Carlsbad, is reported shut down at 3,659 feet in black lime while permit titles are being straightened out. The hole is about at the depth where the objective was expected. It has had several shows of oil and gas. Pecos Valley Drilling Co.'s No. 1 McIntyre, NW NW Section 27-23-25, Dark Canon, drilled into a crevice and had to fill back. It is redrilling at 423 feet in lime.

San Miguel County

Pioneer Oil & Gas Co.'s No. 1 Montezuma, SE cor. NW Section 14-15-16, south of Las Vegas, which resumed a month ago, is shut down at 3,015 feet in sandy lime with a hole full of water.

Santa Fe County

C. C. Owens and others' No. 1 Cantwell, NW cor. Section 5-10n-9e, Cuerto Butte district, near Stanley, began spudding August 22 and is drilling at 200 feet. Elmer Fisher's No. 1 Hill, Section 6-10n-7e, Barton district, is drilling at 600 feet.

Rio Arriba County

Pan States Oil Co., Ltd.'s No. 1 Tierra Amarilla grant, Section 26-3s-1e, El Vado Dome, is reported drilling at 475 feet. This is to be a 6,000-foot test with rotary tools.

COLORADO

The allocation of allowable production under the code to the Rocky Mountain states, including Colorado, Wyoming and Montana is generally satisfactory to the oil men when taken into consideration with other features of the code and the industry, so far as this territory is concerned, is favorably impressed. Colorado is allowed 2,400 bbls. daily. Wyoming's quota is 30,500 bbls. and Montana 6,000 bbls., making a total of 38,900 bbls. daily for the three states. This is practically on the basis of present production. New Mexico, which is allowed 41,400 bbls. daily, is a separate unit. Neither Colorado or Montana are producing as much oil as is consumed by them in refinery products. Under Section 4, Article 3, of the code, it is believed that production within a state may be increased to the state's consumption requirements and that the authority of the President to regulate shipments in interstate commerce applies only to shipments made out of the state.

It is considered unlikely there will be any pronounced increase in production in the three states in the immediate future except in the event new fields are opened and the code makes provisions for that eventuality. There is some production shut in in both Montana and Wyoming, but this production is owned principally by companies who do not need it at this time and who can wait for increased consumption.

The matter of crude prices is receiving more attention than the allowables. There are a number of operators in this territory who are desirous of bringing about a new unit of states, comprising Colorado, Wyoming and Montana, upon which to base the price of gasoline as in Group 3. A movement to form an organization with that object in view has been quietly discussed recently. At present gasoline prices here carry a differential of 2 cents over Tulsa prices, based on tank wagon quotations. If the constant 18.5 is used in fixing crude prices, it is expected that gasoline prices will either have to take a lower base, or crude go above Mid-Continent prices. Wyoming officials have been active in seeking lower gasoline prices and Gov. Leslie A. Miller has wired Secretary Ickes and General Johnson a protest against the Tulsa prices plus freight rates in this territory. The proposed grouping discussed by the independents is looked upon as a possible way to bring about a revision of this practice.

Weld County

Ramsey Petroleum Corp.'s No. 1 Sriven, C NW Section 22-7n-59, Buckingham district, is rigging up and almost ready to spud. It probably will be making hole by the end of the week. The location is three-fourths of a mile southwest of the company's No. 1 St. Anthony, a gas well. It is understood cable tools will be used to drill into the objective sand. Several wells in northeastern Colorado abandoned after having good shows of oil in the cores were drilled in with rotaries.

Moffat County

Rocky Mountain Gas Co.'s No. 1 Eberle, SE SW SE Section 9-6n-91, Craig Dome, set 5⅞-inch on top of the Morapas sand at 3,560 feet and is preparing to test for gas. The cores showed considerable saturation. This formation was not reached in either No. 1 Bogenschultz, discovery well on the Craig Dome, or the test drilled on the Bell Rock Dome immediately to the west.

Mountain Fuel Supply Co.'s No. 2 Florence Wilson, C NE NE Section 22-12-100, Hiawatha Dome, is drilling and coring at 5,635 feet with cores showing some gas and oil saturation. It will probably be drilled through Mesa Verde before a test is made. It stopped for a test at 5,063 feet, but the showings were not commercial. Same company's No. 1 Wheeler, SE NW NW Section 30-12-100, is drilling at 1,390 feet, and Texas Co.'s No. 1 Van Schaick, SW cor. Section 19-12-100, is erecting camp buildings and rigging up.

Mountain Fuel Supply Co.'s No. 1 Hatch, SE NW SW Section 9-11-101, Sugarloaf district, is shut down at 3,519 feet waiting for completion of No. 2 Wilson for heavier rotary equipment.

Texas Co.'s No. 1 Iles Investment, SE NW Section 23-4n-92, Iles Dome, is redrilling at 1,508 feet. Total depth is 2,050 feet.

Fremont County

Cherry Creek Placer Co.'s No. 1 Lucas, SW cor. NE Section 32-18-69, Florence district, is drilling at 2,770 feet in blue shale, and Waterville Oil Co.'s No. 1 State, SE cor. NW Section 16-18-69, Phantom Canon, is drilling below 2,315 feet in red sandy shale.

Park County

South Park Oil Co.'s No. 1 Milligan, NE cor. SE Section 13-8s-76, Jefferson district, is drilling at 3,070 feet with rainbow shows.

Huerfano County

S. W. Pressy's No. 1 Ojo, SW NE Section 10-29-69, Oak View, is resuming at 1,478 feet after running the 8¼-inch to bottom.

Prowers County

Shastatex Oil & Gas Co.'s No. 1 Lotus Oil, NW NE NE Section 15-23-46, Lamar district, is shut down at 2,655 feet in brown shale due to an accident to the head driller. Definite plans are being made to resume at the earliest possible moment.

WYOMING

Weston County

Chadron-Osage Oil Co.'s No. 20, SW SW Section 14-46-64, Osage Field, is feeling for the top of the sand at 2,000 feet. Same company's No. 22, NE SW Section 14-46-64, picked up the sand at 1,840 feet with a considerable show of gas, but will not complete until the company's pipe line connections now under construction are completed this week. Chadron-Osage Co.'s No. 23, NW NE SW Section 14-46-64, is waiting after cementing the 8¼-inch at 966 feet.

Federal Oil Co.'s No. 5, SE cor. Section 15-46-64, is drilling at 1,320 feet, and its No. 6, CEL SE SE Section 15-46-64, has completed standard rig. Riggs Oil Co.'s No. 3, SE NE Section 16-46-64, is drilling below 2,500 feet, and Yellowstone Oil Co.'s No. 4 Butcher, SE NW NW Section 23-46-64, is waiting on cement.

Western States Oil Co.'s No. 9 Bock, SE NW Section 14-46-64, is rigging up, and its No. 10 Bock, NW NE SW Section 14-46-64, has materials on the ground.

Le Faivre Oil Syndicate's No. 1 Martin, NW SE Section 29-45-68, Buck Creek district, is drilling at 1,900 feet and carrying the 8¼-inch.

J. H. Voorhees and others' No. 1, NE cor. NW Section 26-48-64, Pump Creek, is resuming at 100 feet. Empire State Oil Co. is furnishing the casing for this test, Federal Oil Co. is supplying the fuel and Hugh Updike is furnishing the rig and superintending the work.

Converse County

James A. Brady and others' No. 1 Cashner, SW NW NE Section 17-31-71, Warm Springs, was abandoned at 1,210 feet on top of the granite. Another test will be drilled about 2 miles to the southeast.

Crook County

Baker Exploration Co.'s No. 1, NE NW Section 0-49-66, Kara district, is drilling at 1,200 feet. Elmore Syndicate's No. 1 Oost, SE SW NW Section 1-49-66, Wind River district, is drilling at 680 feet. Dr. B. R. Kinter and others' No. 1

Rockford-Wyoming, NE SE Section 13-52-62, Rocky Ford, cemented 12½-inch at 177 feet and at 181 feet it showed for about 6 bbls. per day. This was cased off to continue drilling.

Washakie County

D. L. McDonald and others' No. 1 Wheeler, SW cor. SE Section 30-48-90, Hidden Dome, set pipe on top of the Frontier at 1,360 feet.

Niobrara County

Interstate Oil & Refining Co.'s No. 1 Morrell, NW NE SE Section 2-39-61, West Mule Creek, is drilling at 2,360 feet. M. Huber Corp.'s No. 2 Argo, NE SE SW Section 27-36-65, an old well drilling deeper, encountered water in the top of the Lakota at 3,675 feet. Pipe is being run for a formation shutoff and hole will be carried through that formation.

Sheridan County

Houghton & Mumper's No. 1 Allison, SW SE Section 15-55-85, Beaver Creek, 10 miles southwest of Sheridan, a test in virgin territory, is having trouble with cavey formation at 250 feet and may have to skid rig. This test will go to 3,500 feet or deeper.

Big Horn County

Torchlight Oil Corp.'s No. 1, SW cor. SE Section 19-51-92, Torchlight Field, is resuming at 3,894 feet. It was shut down at that depth last fall after landing the 4½-inch on bottom.

Hot Springs County

Empire State Oil Co.'s No. 4 Republic, NE cor. NW Section 14-44-98, Hamilton Dome, is drilling at 1,800 feet.

Sweetwater County

Mountain Fuel Supply Co.'s No. 3 Poston, C NW NW Section 22-16-104, South Baxter Basin, is running 8⅝-inch on top of the Frontier at 2,600 feet. Cores showed considerable gas.

Carbon County

Ohio Oil Co.'s No. 2 Haxlett, NE NE Section 34-23-79, Allen Lake, is rigged and ready to spud. Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, is drilling at 2,6 0 feet. Mutual Oil Syndicate's No. 5 Dutton Creek, NE NW SE Section 12-18-78, Dutton Creek, set pipe on top of the Shannon sand at 1,675 feet where it had a show of gas, and its No. 9, NW SE Section 12-18-78, is drilling at 4,655 feet.

MONTANA

Glacier County

An explosion at the pumping station on the gas line north of Cut Bank resulted in the death of R. E. Richey and Ed S. Elliott and the critical injury of Emil A. Nelson. Cause of the explosion has not been determined.

A test to the Madison lime in the Cut Bank oil field is to be drilled in R. C. Tarrant's No. 1 Williams, NW cor. NE Section 11-34-6w, which is shut down at 2,844 feet, corrected steel line measurement. Last week this well was reported having 2,000 feet of oil in the hole at 2,860 feet from the Stewart and Darling sands.

Alberta-Pacific Consolidated Oil Co.'s No. 2 Kiesel, SE cor. NW Section 11-34-6w, is underreaming 6⅝-inch at a total depth of 2,798 feet. A. B. Cobb's No. 1 Walburger, SW cor. SE Section 35-34-6w, had a show of oil at 2,818 feet and is preparing to run 6⅝-inch. Dakota-Montana Oil Co.'s No. 2 Haglund, Sr., NE NE Section 14-34-6w, is drilling at 2,100 feet.

Consolidated Gas Co.'s No. 1 Ewing, C NE NE Section 3-34-6w, formerly J. W. Johnson, is drilling at 2,890 feet and had 200,000 feet of gas at 2,867 feet. Montana Headlight Oil Co.'s No. 1 Britton, NW SW NE Section 14-34-6w, is drilling at 2,800 feet.

Montana Power Gas Co.'s No. 1 fee, SW cor. Section 1-35-5w, topped the Darling at 2,780 feet and had 7,000,000 feet of gas at 2,820-36 feet. It probably will drill a little deeper before completing. Same company's No. 1 Miller, SW NE NE Section 4-35-5w, has rig up. Its No. 1 Vermont Loan & Trust, 1,320 feet from the east line on section line between Sections 21 and 28-36-5w, is bottomed at 2,700 feet and gauged 7,300,000 feet of gas from the Moulton sand at 2,685-95 feet. Gas will be bradenheaded and hole carried on down to the Darling.

Nyhagen-Bell's No. 1 Anderson, SE NE SW Section 26-35-6w, has rig up, and Santa Rita Oil & Gas Co.'s No. 1 Cardwell, C NE SE Section 15-35-6w, is drilling up bailer at 600 feet. R. C. Tarrant's No. 2 Britton, SW NW SE Section 14-34-6w, is ready to spud, and his No. 1 Carman, C NW NW Section 19-34-5w, has materials on the ground. Tarrant's No. 3 Haglund, Jr., C SE NE Section 13-34-6w, is drilling at 2,425 feet, and his No. 1 Larson, C SW NE Section 12-34-6w, is drilling at 1,780 feet. Texas Co.'s No. 1 Fisk, C NW NE Section 14-35-6w, is bailing mud after cementing the 7-inch at 2,931 feet. Yukon Oil Co.'s No. 1 Krueger, C SW SW Section 14-37-5w, had a show of oil at 2,623 feet and is drilling deeper.

Carter County

Carter and others' No. 1, NE NW Section 11-2n-59, Coal Creek district, was dry and abandoned at 2,300 feet.

Musselshell County

Hawkeye Oil Co.'s No. 1, NW NE NE Section 20-11-23, Willow Creek, is trying to shut off a flow of 40,000 bbls. of water from sand at 700 feet. It may skid rig and save water for irrigation.

Fergus County

Blackhawk Oil Co.'s No. 1, SE NE Section 21-14-28, South Willow Creek, was abandoned at 3,800 feet.

Petroleum County

Oregon-Flatwillow Oil Co.'s No. 1, SE cor. Section 3-13-26, Flatwillow district, is shut down at 1,325 feet.

Golden Valley County

Golden Valley Oil Co.'s No. 1, SW SE SE Section 28-6n-22, Belmont district, is drilling at 3,617 feet.

Light Crude Oil Show in Naphtha Producing Horizon of Deep Lime, Turner Valley

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Sept. 9.—Official figures of crude production from all Alberta fields show a total for July of 87,207 bbls. against 100,624 bbls. for June. The June figures, however, included 16,280 bbls. produced prior to that month but not previously brought into account; so that the actual production is fairly equal. From the Turner Valley production for July, handling losses of about 3¾ per cent were reported. Net production was greater than sales by about 1,500 bbls., and oil in storage at the end of July was 17,158 bbls.

The comparative figures follow:

Field—	July	June
Turner Valley naphtha	83,066	94,897
Turner Valley light crude....	1,555	1,545
Red Coulee-Border light crude	2,272	3,789
Wainwright heavy crude.....	314	393

Crude Oil in Lime

In the Mercury area, South Turner Valley, Miracle Oils' No. 2, LSD 16, Section 5-19-2w5, has encountered a fair show of light crude oil in the naphtha-producing horizon of the deep lime at around 6,200 feet. The test is continuing. The test is 271 feet in the lime. Two previous tests in Turner Valley have encountered light crude in the naphtha horizon. Miracle Oils' No. 3 finished with a small production; while in the north end Model Oils' No. 2, LSD 8, Section 22-20-3w5, is a large producer of light crude. Miracle's No. 2 is on the west side of the structure.

In the same section, Associated Royalties' No. 1 Spray, LSD 9, is reported making progress with a difficult casing job at 3,350 feet. South of Miracle's No. 2. R. P. Davis & Co. of Calgary have closed a deal for acreage south of the Miracle well.

North Turner Valley

In the North Turner Valley area, Model Oils' No. 2 Anaconda, LSD 16, Section 22-20-3w5, has stopped drilling 1,039 feet in the lime at 6,539 feet. The formation showed no change in the brown lime and no additional production has been encountered. A wet gas flow of around 5,500,000 feet was claimed at around 5,924 feet depth. The hole will be bridged back to 6,000 feet and the sand for 200 feet above that given acid treatment with possibly a shot of 700 to 800 quarts. Production was encountered in a porous horizon about 50 feet above this sand, but this upper horizon will not be treated at present. This is the first attempt to utilize modern acid treatment in Turner Valley.

McDougall-Segur Program

Systematic testing of promising acreage for crude oil production is planned by the McDougall-Segur Exploration Co. which holds acreage in the northern part of the Central Turner Valley area. Drilling will be carried on in Section 12-20-3w5, with the first well in the southern portion of the McDougall-Segur holdings. It is expected to spud in this month with the McDougall-Segur light crude sand around 2,800 feet as its objective.

Alberta government officials have strongly urged the drilling of tests with these shallower light crude horizons as an objective; and recent drilling by New McDougall-Segur Oil Co. has shown that, though small producers, around 50 to 100 bbls. a day, such wells, if economically drilled, will pay out in a short time. McDougall-Segur Exploration Co. is planning to drill out its acreage, working from the proven area in Section 14; and it is stated drilling will be practically continuous, completion of one well being immediately followed by starting another.

New McDougall-Segur's No. 6, LSD 11, Section 12-20-3w5, is reported making a fair production of light crude from a horizon at 3,190 feet.

Tests in Far South

In the far south end of Turner Valley, Hoffar-Lundy Syndicate's No. 1, LSD 13, Section 22-18-2w5, is reported to have got the Dakota formation below 3,200 feet. Highwood-Sarcee Oils' No. 1, NE Section 21-18-2w5, has spudded in, west of the Hoffar-Lundy well.

Calling Valley Test

On the Calling Valley structure, east of Central Turner Valley, Sentinel Oils' No. 1, LSD 15, Section 8-20-2w5, has resumed drilling after being shut down for nearly four years at around 5,850 feet. The test is close to the highway between Okotoks and Turner Valley. Drilling started in the Edmonton formation and was in a post-Benton horizon at the present depth. Gas shows were met at 2,890, 3,580 and 3,980 feet and a little oil at 4,255 and 4,870 feet. On resuming the hole was found in good shape with 8-inch casing to the bottom. The work is in charge of J. F. M. Moodie. Anglo-Indian Oils, Ltd. has a location on the same structure in LSD 1, Section 36-21-3w5, but no work has been done beyond erecting derrick.

Tests in the Foothills

In the forest reserve area west of Olds, Hunter Valley Oil Co.'s No. 1 McLaren, Township 31-10-w5, is drilling below 2,005 feet after fitting new 7,000-foot drilling line. Some 13⅜-inch casing is being hauled. The boilers are running on gas from the well. The test is logging close to expectations, and no water has been encountered.

New Turner Valley Test

R. P. Davis of Calgary has resigned from the directorate of Graystone Consolidated Petroleums, Ltd., now operating in the Moose Mountain area, and is organizing Doralta Royalties, Ltd., to drill a test on acreage recently secured in South Turner Valley, a short distance south of the Mercury and Miracle wells. Doralta's No. 1 has been located in LSD 16, Section 32-18-2w5, the section immediately south of Miracle Oils' No. 2, which recently struck a show of crude in the lime.

Simons Valley Test

In the Simons Valley area northwest of Calgary, John Ethridge and associates are arranging for a deep test. The Ethridge syndicate is planning to drill a series of structure tests throughout the Simons Valley, and if these show encouraging conditions a deep test will be undertaken.

Northern Alberta

In the Athabaska district, northern Alberta, Athadome Oils' No. 2, LSD 3, Section 15-66-23w4, may be drilled deeper. It got a 50-foot sand, yielding a fair quantity of 13 gravity crude, around 1,650 feet and was deepened to 2,236 feet, which is now thought to be close to another potential producing horizon. The company is planning to drill its No. 3 well in the northern part of its acreage. The sand at 1,650 feet indicated a probable production of 15 to 20 bbls. a day, which the company is planning to refine in the field and market in the northern areas where high prices for petroleum products would make the proposition a commercial one.

Askalta Operations

Askalta Oil Co. of Calgary has announced that a new test will be started within 30 days on its acreage in the Montana end of the Red Coulee Field. The Askalta Oil Co. was organized in 1929, the officers being: President, W. R. MacArthur, Calgary; vice president, A. G. Anderson, Gull Lake, Saskatchewan; secretary-treasurer, D. P. McDonald, Calgary; directors, A. MacLeod Sinclair, and A. M. Venables. It is understood the new test to be drilled this fall will be followed by additional drilling next spring, the western portion of the company's acreage having locations for seven or eight additional wells. The company owns a full line of drilling equipment.

Ontario Drilling

In the Tilbury Field, Kent County, Ontario, Southern Ontario Gas Co.'s test, drilled by Ralph Dawson in Lot 5, Concession 15, Tilbury East Township, fin-

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Ten Completions Reported in Michigan Fields; Largest Well Makes 3,600 Barrels Initially

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Sept. 9.—Ten completions, including five Porter Township, Midland County, oil producers making an aggregate of more than 4,000 bbls. initial and five dry holes, three in western Michigan and two in Mount Pleasant, comprised the record in the State this week.

Despite the added initial, however, average daily production declined because of the new 60 per cent proration of the potential flow of all wells making more than 1,000 bbls. in the Porter Township Pool. The new proration schedule was announced Wednesday by a special field committee named by the Oil and Gas Producers Association of Michigan in Mount Pleasant. To offset the deterrent effect of this order came announcement of a 10-cent increase in the price of crude from 70 to 80 cents a barrel posted by the Pure Oil Pipe Line Co., principal purchaser.

The largest well completed in Michigan this week was Gordon Oil Co.'s No. 1 L. Good, NE NE SE Section 17-13n-1w, Porter Township, Midland County, which made 3,600 bbls. initial at a total depth of 3,424 feet. Dundee was topped at 3,387 feet.

Pure Oil Co. completed two smaller producers in Section 17, Porter Township. No. 1 Charles Hill, SW SW NW Section 17, made 150 bbls. initial at a total depth of 3,428 feet, while No. 1 John Miller, NW SW Section 17, made 400 bbls. at 3,425 feet.

Edward Stewart's No. 3 Richmond, NE SE SW Section 22, Porter Township, was good for 250 bbls. initial at 3,406 feet.

Stork Oil Co.'s No. 1 J. Hill, NW SW SE Section 22, flowed 300 bbls. after being treated with acid. It is 3,422 feet deep.

M. R. and M. Wells finished their No. 1 George H. McCann, C SW SE Section 25, Porter Township, at 3,378 feet where it was dry and abandoned.

The other dry hole in the Mount Pleasant area was Fred Turner's No. 1 J. Mahar, SE NE NE Section 26-16n-4w, Vernon Township, Isabella County, which quit drilling at 3,812 feet. This well made a showing of more than 3,000,000 feet of gas in the Michigan series just above the Marshall formation.

New Committees Named

New Michigan planning and co-ordinating, as well as proration committees, were named at a special meeting of the executive committee of the Oil and Gas Producers Association of Michigan in the office of the president, Haswell Grant, of Mount Pleasant.

The committee includes George W. Talbot, of Mount Pleasant, chairman; Charles L. Maguire, president of the Roosevelt Refining Co., of Mount Pleasant; James C. Graves, of Saginaw; Howard D. Atha, of Mount Pleasant; George Fink, representing Vernon Township; W. A. Hower, field superintendent of the Muskegon Oil Corp., Muskegon, and a representative to be chosen by the Pure Oil Co.

A proration committee comprised of Fred Stork, Stork Oil Co.; Mr. Graves and Mr. Yarvo, was named to act immediately to curtail production in the Porter Township Pool. They have employed Fred Turner, an independent operator of Mount Pleasant, as referee.

The planning and co-ordinating committee will seek to assist in the Federal allocation for Michigan. The Michigan allowable of 30,000 bbls. a day is in accord with a recommendation of the new Michigan Refiners Association, formed by five independent refineries to act under the oil code. The Producers association sought to increase the allowable to 50,000 bbls.

Pure Oil Pipe Line Co. has purchased a line recently laid across the Porter Township area by Producers Pipe Line Co., subsidiary of the Old Dutch Refining Co., of Muskegon. The Producers Co. retained possession of a 20,000-bbl. storage tank from which it will continue to load large tank trucks in which crude is transported to its Muskegon refinery.

The Muskegon Oil Corp. is making a torsion balance test of thousands of acres near the old Muskegon Field in a scientific attempt to locate other oil or gas production within the county. W. P. Jenny, of Houston, Tex., is engaged in testing the Muskegon County acreage of the Muskegon corporation and four affiliated companies.

Western Michigan

Three dry holes and a structure test well were completed in western Michigan this week. The three "dusters" established a limited area for commercial production in the upper Traverse formation in the new Oceana Field, while the structure test ran comparatively low in a block of about 1,200 acres being tested several miles southeast of the Muskegon Field by Muskegon Oil Corp.

Bottom water was encountered in the Eureka Gas & Oil Co.'s No. 1 Joseph Chesnus, SE NW Section 36-15n-17w, Hart Township, Oceana County, at a depth of 1,910 feet. A. S. Cochran, of Muskegon, struck water at 1,887 feet in No. 1 Maude Phillips, NE SW Section 31-15n-16w, Elbridge Township, Oceana County. Johnson Oil Refining Co.'s No. 1 I. Copenhaven, SE SE Section 31-15n-

(Continued on Next Page)

Wyandot, Seneca, Stark Counties, O., Busy; Four Completions Reported in Kentucky

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Sept. 11.—In the Lima Field of northwestern Ohio, Jones & Coyle's No. 5 on the Margaret Brillhardt farm, Section 28, Crane Township, Wyandot County, had a reported 40-bbl. production, and Upper Sandusky Oil & Gas Co. brought in a gas well close to 3,500,000 feet in No. 1 on the Adolph Veith farm, Section 28, same township, at 1,337-55 feet. Same company is drilling No. 5 on the Oscar J. Weiker farm, same township. An even dozen wells are under way in the Wyandot area. Nine of the wells in Crane Township, Wyandot County, should come in within a short time and will boost the amount of crude oil and gas, with a good market for both products.

CENTRAL OHIO

Active development continues in the Central Ohio division and fairly good results are obtained, both oil and gas being sought. In Ashland County, Ohio Fuel Gas Co.'s No. 1-5,737 on the Alice G. Myers farm, is a gas well in the Clinton formation at 2,420 feet. McMillan and others are drilling on the Frank Harrison farm, Section 6, Carlisle Township, Lorain County. Moore and others' No. 6 on the George W. Black farm, Section 34, Mohican Township, Ashland County, found an oil showing in the Berea from 797 to 822 feet and may make a commercial producer.

In Medina County, D. A. Lake's No. 6 on the L. A. Severcool farm, Lot 1, Litchfield Township, produced 25 bbls. initial from the Berea sand at from 257 to 350 feet.

In Summitt County, East Ohio Gas Co. brought in a gas well in No. 3 on the Everett Bexler farm, Section 17, Green Township, at 3,571-84 feet.

In Coshocton County, Preston Oil Co. is drilling No. 2 on the William Frazee farm, in Newcastle Township.

In Licking County, Wehrle Gas Co. got a showing of gas in No. 2 on the Gail Baker farm, Lot 1, Granville Township, at 2,265-87 feet, and may be deepened. Same company's No. 1 on the O. A. Kreager farm, Lot 10, Franklin Township, same county, is a light gas well in the Lime formation at 2,377-89 feet. In Fallsburg Township, same county, Emerald Petroleum Co. made a location for No. 2 on the Calvin Mossholder farm, Section 14.

In Muskingum County, Hopewell Gas & Fuel Co. struck a gas well on the Thomas B. Weaver farm, Section 16, Brush Creek Township, at 4,195 feet. Mid-East Oil & Gas Co. struck a dry hole on the R. A. Miller farm, Section 30, Muskingum Township, at a total depth of 3,468 feet. The Berea sand in this well was also dry at from 915 to 935 feet.

In Athens County, Ohio Fuel Gas Co.'s No. 104 on the Sunday Creek Coal Co.'s property, Lot 34, Trimble Township, reported showing for 2 bbls. at 3,681 feet. In Lodi Township, same county, same company drilled a gas well in No. 1 on the John E. Ruth farm, in Fractional Section 18, at 1,643 feet and Fairfield Gas Co. struck a gas well in No. 2 on the W. M. Harris farm, in the same fractional section, at 657 feet. In Benre Township, same county, Ohio Fuel Gas Co.'s No. 1 on the Ruth Brooks farm, in fractional Section 17, was a dry hole in the Berea sand from a depth of 1,769 feet.

Only one completion was made in the Stark County Field, being Hoover Development Co.'s No. 1 on the Hoover company property, Section 20, Plain Township, which was a gas well at 4,522-48 feet. In this township, Cable & Campbell are drilling on the Levi A. Stoner farm, Section 20. Cunningham Natural Gas Co. has a rig on the Levi Stoner farm, Section 17, Plain Township. In the same township, East Ohio Gas Co. is drilling No. 1 on the Mary Marquardt farm, Section 8; also drilling No. 1 on the E. H. and Bertha Styer farm, Section 10; drilling No. 1 on the Charles Pontius farm, Section 11, and has a rig for No. 1 on the Alfred E. Hockwalt farm, Section 1. In Jackson Township, same county, Brendel Producing Co. is drilling No. 1 on the H. L. Shriver farm, Section 10, and No. 2 on the J. S. Unger farm, Section 17, same township. Ohio Fuel Gas Co. is drilling No. 1 on the Clara Warstler farm, Section 18, and same township, and East Ohio Gas Co. made a location for No. 3 on the John Hyles farm, Section 13, same township.

Several other wells are nearing completion in Stark County. White and others' test on the Jacob Isler farm, Section 25, Perry Township, is drilling below 3,900 feet, and same parties' No. 1 on the Forest Hill Cemetery Lot, Section 20, Plain Township, is drilling below 4,100 feet. Stoltz and others are drilling below 4,200 feet on the Lyndhurst addition, Section 17, same township.

Brendel Producing Co. has a number of wells nearing the pay sand in Stark County. Among them are: No. 1 on the Joseph H. McDowell farm, Section 16, Plain Township, drilling below 3,900 feet; No. 1 on the A. and L. Stephens farm, Section 9, below 4,200 feet; No. 1 on the V. L. Ney farm, Section 10, below 3,600 feet; No. 1 on the Lillian Shoemaker farm, Section 5, below 3,100 feet. Same company is drilling below 3,500 feet on the D. Schlaback farm, Section 25, Lake Township, same county.

Unknown parties brought in a fair gas well on the Fowler farm, in Hanover Township, Columbia County, at 5,900 feet.

KENTUCKY

Four completions were reported from the Kentucky fields, where very little development work is shown over the western area of the state. The only producer was Hupp & Duff's No. 5, 1,110 feet from the south line and 550 feet from the west line of the Martha Ann Sparks farm, in the Jones Pool, in Daviess County, which produced an initial of 26 bbls. from a depth of 793 feet.

In the Scottsville Field of Allen County, three completions were made, all being dry holes. They are H. B. Bastrus and others' No. 1 on the Jim Bryant farm, dry at 416 feet; same firm's No. 1 on the Harve McCleary farm, dry at 325 feet, and H. H. Coughill and others' No. 50 which was dry at 237 feet.

INDIANA-ILLINOIS

No completions were reported from Indiana and Illinois fields for the week.

Michigan Fields

(Continued from Preceding Page)

16w, Elbridge Township, also was dry at 1,923 feet.

No. 1 Chesnus limits production to the northwest of the James Flanagan's No. 1 E. Mitchell, SE SE Section 36, Hart Township, largest of four producers in the field, ranging from 25 to 800 bbls. initial. The Cochran-Phillips' test was located about a quarter mile east and slightly north of No. 1 Mitchell. The Johnson-Copenhaven was a direct east offset to No. 1 Mitchell. H. C. Nelson's No. 1 A. Doolittle, NE SE Section 36, Hart Township, completed last week, is now making about 100 bbls. a day on the pump as the third largest Oceana producer.

Mr. Flanagan is rigging up or drilling on three additional wells on the E. Mitchell lease on which he has completed two producers, Nos. 1 and 2.

Muskegon Oil Corp.'s No. 1 Jacob Drent, NE NE SW Section 30-10n-15w, Egelston Township, was completed as a red rock test at about 1,000 feet. A second test will be started on the same block.

Muskegon Strippers

A new western Michigan branch of the Oil and Gas Producers Association of Michigan, which will seek to have the Muskegon Field designated as a stripper field and therefore not subject to proration, was formed at a meeting of producers, contractors, drillers, tool-dressers, refiners, field men and supply company represenattives in Muskegon, Thursday, September 7.

The branch also will assist in a move to increase Michigan's allowable, it was stated by W. A. Hower, field superintendent of the Muskegon Oil Corp., and western Michigan member of the executive committee and of the new planning and co-ordinating committee formed this week by the Michigan association. Charles E. Myler, vice president of the Muskegon Oil Corp., and head of the Muskegon Development Co., was named chairman, and C. L. Benezette, local manager of the Oil Well Supply Co., secretary of the new western Michigan branch.

Permits Issued

Twenty-nine permits to drill were issued. These include 16 in Midland County (13 in the Porter Township area and 1 each in Greendale, Jasper and Lee Townships), 7 in Vernon Township, Isabella County, 3 in Muskegon Township, Muskegon County, 1 in Mill Township, Ogemaw County, and 2 in Hart Township, Oceana County.

The new locations in Porter Township are: Gordon Oil Co., No. 2 W. Diebel, NE SE NE Section 18-13n-1w; Pure Oil Co., No. 2 George Whitney, SW NE SE Section 17; No. 2 A. C. Wyant, SW NE SW Section 16; No. 3 A. C. Wyant, SE SW SW Section 18; No. 3 Charles Hill, SW SW NE Section 18; No. 7 Mina C. Naramore, SE NE SW Section 15; William J. Wilson, trustee, No. 2 William M. Carter, NW NE SW Section 18; Pure Oil Co., No. 1 W. W. Hoyt, NE SE SE Section 17; No. 1 Floyd Younglove, NE NE SW Section 17; No. 4 Charles Hill, NE SW NW Section 17; No. 1 Bond-Risley, SE NE NE Section 20; Stork Oil Co., No. 2 James C. Hill, NE SW NE Section 22, and No. 3 Charles E. Baxter, SW NW NE Section 22.

Other locations in Midland County include: Pure Oil Co., No. 3 Mattie Yost "A," SE NW Section 35-14n-2w, Greendale Township; No. 2 Frank Sinif, NW NE Section 2-13n-2w, Jasper Township, and W. Hunter Atha, No. 1 fee, NW NW SW Section 8-14n-1w, Lee Township.

New Vernon Township locations include: Garfield Oil & Gas Co., No. 1 F. Verette, SW NE SE Section 23-16n-4w; Mellon-Pollock Oil Co., No. 2 Charles Durnin, N half S half NE Section 22; W. J. Sovereign, Nos. 1 and 2 Ann Arbor Railroad, NE NE NW Section 27, and NE NE NW Section 22, respectively; Mammoth Petroleum Corp., No. 1 T. Crowley, NW SW NW Section 25, and J. V. Wicklund, Nos. 3 and 4 Dan Carmichael, SE SW NE Section 22, and SW SE NE Section 22, respectively.

Muskegon Permits

The three new Muskegon Township, Muskegon County locations are: Lima Oil Corp., No. 1-A Margaret Figge, NW SE NW Section 9-10n-16w; Lima Oil Corp., No. 11 Louis P. Haight, NW NE NW Section 16, and Joseph R. Murlin, No. 1 Anna Ross, SW NE NW Section 22.

The new Ogemaw County test will be drilled by C. A. Perry, of Lakeview, Mich., on the Wobig heirs' property, SW SW NE Section 6-21n-3e, Mills Township.

The two new Oceana County wells are James Flanagan's Nos. 4 and 5 E. Mitchell, both on a lease in the E half SE Section 36-15n-17w, Hart Township.

Completions in Eastern Field Continue Increase; Best Producer in Southeast Ohio District

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Sept. 11.—Pennsylvania was notified that a total of 36,200 bbls. a day would be permitted under the NRA codes, effective September 8. This is a reduction from the average daily production of 1932 of about 1,500 bbls. a day. It must be remembered that during the year 1932 curtailment was in effect the entire year and that the average allowable production was a trifle over 78 per cent, and that the base of 100 per cent was computed on an average month taken around November, 1931, after a considerable period of self-imposed curtailment on the part of producers of Pennsylvania Grade crude. It will also be recalled that it was a period of depressed crude prices, which prevented drilling for new production to offset declining wells.

Pennsylvania is dependent on imports of gasoline to supply its demand. Its own gasoline supply from the refining of Pennsylvania Grade crude is inadequate, yet an increasingly wide market has been created for Pennsylvania Grade lubricants. For the past few months, refinery demand has been in excess of production by several thousand barrels a day, and after all restrictions had been removed from production, a succession of increases in the crude price structure were offered as an inducement to increased production.

At the present time the district around Bradford, Pa., has reached a peak of about 30,000 bbls. a day, far below its former potential. The Southwest Pennsylvania fields are producing about 3,500 bbls. a day, and in the middle division about 6,500 bbls. a day can be counted on. This appears several thousand barrels a day in excess of Pennsylvania's allowable. On the face of the figures, unless some relief is granted, stripper wells will be again forced to curtail.

Completions in the eastern fields continue to increase. A total of 15 wells and 5 dry holes were reported during the week. Five of the wells were producers with an initial production of 145 bbls., all located in Southeast Ohio.

SOUTHEAST OHIO

The best producer for the week was completed in Coshocton County, where two fair producers were brought in. In Clarke Township, Lot 7, Ohio Oil Co. completed No. 5 on the Robert Rodke farm in the Clinton sand at a depth of 3,625 feet. It produced 50 bbls. the first 19 hours after shot. In Section 17, Perry Township, Kundtz-Hulse, Inc., and others completed second test on the R. L. McKee farm in the Clinton sand at 3,110 feet. It produced 35 bbls. the first day after shot and is rated as a 25-bbl. well.

Ashland County had a fair completion. In NW Section 33, Mohican Township, C. O. Moore completed No. 3 on the George Black farm in the Berea sand at a depth of 825 feet. It produced 20 bbls. the first three days.

In Jefferson County, 1¼ miles northwest of Mingo Junction, in Section 28, Steubenville Township, Altamount Oil Co. completed a test on the Elmer Hardy farm. It is a Berea sand well at a depth of 1,509 feet and during the first 24 hours after shot, 20 bbls. were swabbed. In Island Creek Township, SE Section 1, Lee & Co. drilled a test on the J. C. and F. A. Butte farm, through the Berea sand to a total depth of 1,550 feet and though it had a light showing of oil after shot, it does not appear it will be completed as a producer.

In Medina County, another fair well was completed in the shallow sand area. In Section 1, Litchfield Township, D. A. Lake completed No. 5 on the Pearl and Frank Weaver farm in the Berea grit. It produced 20 bbls. the first day after shot.

In Meigs County a test proved dry. A. N. Bengel drilled a test on the Minnie Hiland farm, NE Section 26, Salisbury Township. It went through the second Berea sand to a depth of 1,565 feet without striking a paying formation.

In Washington County, casing was pulled from two of the wells drilled to the deeper Warren sands, one of them now being a small gas well. In NW SW Section 10, Independence Township, Penn Ohio Gas Co. pulled out the smaller casing from its deep test on the John Semmler farm, and sold the well to Craten Brothers as a 10,000-foot-per-day gas well from the Berea sand. In NE cor. NE Section 16, Independence Township, Buckley & McCall Drilling Co. pulled out its test on the Porter Pryor farm. It was a dry hole in the Warren sand at a depth of 3,390 feet and had been standing pending the result of the deep test on the E. E. Knowlton farm. The Semmler well was 3,142 feet deep.

WEST VIRGINIA

No producers were completed in West Virginia. In Lost Run Pool, Clay district, Ritchie County, Boehm and Strickler's No. 3 has declined rapidly from its peak but is still flowing about 350 bbls. a day. No. 2 declined to about 100 bbls. a day but after agitating with the tools, production increased to 240 bbls. a day. No. 2 on the Frank R. Ball farm is making about 50 bbls. a day.

In this field Richards Farm Oil Co. is building a rig for No. 3 on the Frank R. Ball farm. Same company is drilling at about 700 feet in No. 1 on the Mitchell Moran farm, and Smith and others are down a similar depth on the C. H. Fredrick farm.

Gas Wells

In Calhoun County, two gas wells were completed and one test proved dry. In Lee district, on Mushroom Run of West Fork, F. F. McIntosh completed No. 3 on the S. A. Hays farm in the Injun sand at 1,877 feet. It is good for about 300,000 feet a day. In Sheridan district, Cain & Rothwell completed a test on the Lee Roy Jones farm in the Injun sand at 1,967 feet. It will make a small gas well. In Washington district, Grant Fowler drilled a test on the Orval Postlethwait farm through the Injun sand to 2,155 feet. It was dry in all formations and will be abandoned.

In Logan County the West Virginia Gas Corp. completed a fair well. It was No. 37 on the Guyan Merch Co. lease and was drilled in the Berea sand at a depth of 2,576 feet. It is showing for about 900,000 feet a day.

In Putnam County, United Fuel Gas Co. completed No. 4,378 on the H. P. Phelps farm in Curry district. It was drilled in the Berea sand and is showing for about 200,000 feet a day. In Harrison County, Hope Natural Gas Co. completed a test on the M. V. Peck farm in Clark district in the Shale at 3,160 feet and has a gas well.

In Ritchie County, on the right hand fork of MacFarlan Creek, Murphy district, Deems and Overton completed a test on the J. P. Overton farm in the Big Injun sand. It is a gas well gauging at about 100,000 feet a day. In the same district but on Indian Creek, J. F. Deem completed a second test on the Mansfield Haught farm in the Maxon sand at 1,640 feet, a light gas well.

In Marion County, Victor Oil & Gas Co. drilled a test on the Charles H. Freeland farm in Mannington district through the Bayard sand to 2,950 feet. It was dry in all formations.

Drilling in West Virginia

Activity in Ritchie County is increasing. In Grant district, Leeton and Flanigan have made a location on the Roy Delaney farm, and E. Dilley and others one on the A. E. Dye farm. In the Murphy district, Lewis and Litten Gas Co. has spudded in and started drilling on the Conley heirs farm. Uhl and Bailey are down 1,370 feet on the J. V. Varner farm.

In Cabell County two new tests are starting. J. W. Ramsey and Sons are spudding in on the W. E. Duncan lease in Guyandotte district. In the same district, H. H. Baker Gas Co. has a rig standing on the J. M. Lewis property. In McComas district, West Virginia Gas Co. is fishing for the toois on the H. L. Day farm at 2,260 feet. Ora Ann Gas Co. is down for casing at 1,425 feet on the George H. Midkiff farm.

In Marshall County, Guy B. and A. G. Patterson are rigging up to drill a second test on the G. and A. B. Williams farm in Liberty district. In Wetzel County, Manufacturers Light & Heat Co. is drilling deeper No. 3,300 on the W. P. Hubbard farm in Church district. The depth is now 2,200 feet. In Monongalia County, same company is drilling deeper No. 1 on the Henry Yost farm in Battelle district. It is now 3,323 feet deep.

In Roane County, two wells are drilling. Bartlett and Mace are down 200 feet on the Webb and Mace lease in Spencer district. In the same district, Hildreth Gas Co. has reached 1,170 feet in a second test on the Roy Hildreth farm.

In Calhoun County, L. P. Bickel has part of the material on the ground for No. 12 on the Martha Stump heirs farm in Sherman district. In this district, C. A. Jarvis and others are building a rig for a second test on the Ida M. Whipkey farm. C. B. Lewis and others are drilling at 496 feet in a second test on the W. T. Kelly farm. McCall and others are down 1,575 feet on the White Hall farm. Poling and Mollahan have started drilling on the Almetta Wilson farm. Lyle S. Ayers and others are down 700 feet on the Kate Garritson farm. In Sheridan district, Chemical Oil Co. has a rig standing on the Margaret J. Webb farm. In Lee district, Lowther and Shuman are drilling on top of the Injun sand on the Rufus and Maude Mace farm.

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Marked Increase Reported in California Drilling; New Deep Zone in Montebello Indicated

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Sept. 11.—There has been a marked increase in California drilling operations during the past two or three months, due primarily to increased development work in the Huntington Beach, Richfield and Mountain View Fields, but this upswing may be broken before another 30 days if the state is successful in its attempt to prevent tideland exploitation in the Huntington Beach Field, as this will mean a complete suspension of drilling operations in the Huntington Beach Seventeenth Street town lot area until the situation is finally adjusted. State officials have been collecting evidence preparatory to instituting a suit to prevent the production of oil and gas from beneath state tidelands by wells that have been whipstocked or artificially deflected out into the ocean beyond the high tide line. Barring the cessation of drilling operations in the Seventeenth Street town lot area, development work in California should show a further increase during the balance of the year due to the starting of new wells in the Kettleman North Dome Field and additional drilling expected in the Montebello Field where a new deep zone was recently discovered by the Universal Consolidated. Huntington Beach holds the key to the future trend of development as the issuance of an injunction prohibiting further production from beneath state tidelands would obviously preclude further drilling in that field until the matter is definitely settled.

Field Quotas

Distribution of field quotas by the Central Proration Committee of California allocating the 480,000 bbls. provided under the new code has been sent to Secretary Ickes.

The allotment of 480,000 bbls. of oil daily to California represents an increase over the quota in effect during August of 23,750 bbls. daily. Of the total, 11,770 bbls. daily increase was given to San Joaquin Valley fields which raised the quota for the district from 168,730 bbls. daily to 180,500. Coastal district fields were given an increase of 3,090 bbls., which boosted their quota from 59,410 bbls. daily to 62,500 bbls. Quotas for the Los Angeles Basin fields were increased from 224,110 bbls. daily to 237,000 bbls., a gain of 11,890 bbls. daily.

Notable increases in quotas set by the Central Proration Committee compared with the net quota in effect during August included the following:

Field—	August quota	New approved quota	Net incr'se
East Coalinga	4,700	8,700	4,000
Kettleman N. Dome	80,000	83,000	3,000
Midway-Maricopa	49,380	52,000	2,620
Round Mountain	None	2,000	2,000
Elwood	13,500	14,500	1,000
Santa Maria	3,920	5,000	1,080
Ventura Avenue	35,000	36,000	1,000
Brea-Olinda	8,000	9,400	1,400
Dominguez	18,000	20,000	2,000
Huntington Beach new	15,950	18,500	2,550
Long Beach	55,175	60,000	4,825
West Coyote	8,500	9,000	500

Other fields receiving increased quotas other than those listed above included West Coalinga, Kern River, Lost Hills, McKittrick, Summerland, Ventura-Newhall, Alamitos Heights, East Coyote, Inglewood, Los Angeles, Montebello, Playa del Dey, Torrance-Hermosa and Whittier.

Montebello Field

Production of the Universal Consolidated Oil Co.'s No. 1 Cruz in the Montebello Field definitely indicates the existence of a new deep zone in that field. No. 1 Cruz came in wet on its initial production test a few weeks ago but the water problem appears to have been overcome by a recement job on the water string as current production, 988 bbls. of 37.5 gravity oil, is only cutting 2 per cent. In recompleting No. 1 Cruz late last week, Universal drilled only 5 feet below the shoe of the 8⅝-inch water string landed and cemented at 6,954 feet. The company recently staked location for two new wells to be drilled in the extreme eastern part of the field and rig construction is expected under way within 10 days. M. K. Nance is putting the finishing touches on a new rig on the Lewis property in Section 6-2-11 but drilling may be retarded by litigation to determine title. The lease was originally a part of acreage held by Lucky Baldwin but was not included in the Baldwin lease to the Standard Oil Co. as the lessor withreld this narrow strip to provide an easement for a projected 70-foot road. The highway was never constructed and the property reverted when the executors of the Baldwin estate quitclaimed their right to build and dedicate a road. Another few weeks will probably throw some light on just how much new work will be undertaken in the Montebello Field during the next several months. Operators holding potentially productive acreage are desirous of retarding deep zone exploitation but may be forced to engage in deep drilling if any considerable amount of work is undertaken around the edge of the structure. This is particularly true in the event that M. K. Nance starts drilling operations on the Lewis property because Standard will be obliged to drill an offset, and if Standard drills a new well to the deep zone other operators will feel at liberty to undertake similar development. Fortunately, acreage in the Montebello Field is held in relatively large blocks and the field will be free from competitive drilling.

Huntington Beach

The latest completion in the Seventeenth Street town lot area of the Huntington Beach Field was Termo Corp.'s No. 4 fee, which came in under a natural flow doing 1,272 bbls. of clean 25.6 gravity oil and 20,000,000 feet of gas per day in the tideland zone. Just previous to the completion of No. 4 Termo, Simaroo Oil Co. put No. 2 Morris on a production test but it failed to come up to expectations. No. 2 Morris, which had the largest penetration in the tideland zone, came in flowing 25,000,000 feet of gas per day but failed to show any crude oil and was accordingly shut in. This well apparently deviated in a horizontal direction along the uppermost part of the tideland zone. Approximately 15 new wells are scheduled in the Huntington Beach town lot area within two weeks, although work may be retarded if state officials institute court action.

Richfield

Operators in the Richfield district have initiated a conservative policy on development work in the Breen zone. Due to the limited amount of data with respect to the extent and potentiality of the Breen zone, it is difficult to estimate just how much additional work may be undertaken during the next six months. Completions in this horizon have been commercially productive, although none of the wells have shown an exceptionally high initial.

Standard Oil Co. completed No. 53 Emery, in the West Coyote Field, bottomed at 6,361 feet but plugged back to 5,725 feet and finished with a 6⅝-inch liner including 445 feet of perforated, and brought in on a compressor doing 120 bbls. of 29.4 gravity oil cutting 6 per cent. Standard's No. 113 Murphy Coyote, finished a few weeks ago, has been beaned back to 1,461 bbls. of 29.2 gravity oil and 1,876,000 feet of gas per day. In the Long Beach Field, Shell Oil Co. completed No. 40 Alamitos doing 414 bbls. of 25.1 gravity oil per day on a compressor, although the output is still cutting in excess of pipe line requirements. Bottomed at 5,084 feet but plugged back to 4,985 feet, it was finished with a 4¾-inch liner carrying 192 feet of perforated. Fairchild and Mitchell recompleted No. 1 Babcock early in the week and was returned to production pumping 116 bbls. of exceptionally clean 28.2 gravity oil per day from 4,405 feet after the hole had been finished with a 4¾-inch liner including 755 feet of perforated. Dabney-Johnston Oil Corp. has staked location, near the corner of Willow & Juniper, for No. 90 Signal and rig material is expected on ground within a few days.

Kettleman Hills

North Kettleman Oil & Gas Co. has received the first truck load of a long string of 3-inch drill pipe and is expected to resume drilling operations in No. 1 Lillis-Welsh in the Kettleman North Dome Field, the deep test, early in the week. The total consignment represents approximately 10,000 feet of drill pipe. No. 1 Lillis-Welsh was suspended about two months ago when mechanical trouble developed at 10,944 feet. Union Oil Co. has purchased a 50 per cent interest in the Lillis-Welsh property and in consideration will advance sufficient money to permit the completion of this well, provided the expenditure does not exceed $100,000.

Several new wells are being started in the Kettleman North Dome Field, principally by the Kettleman North Dome Association and Standard Oil Co., each scheduled to spud in four wells. The Kettleman Middle Dome Field has been inactive during the past 30 days but a new well is to be started early in October. The Kettleman Middle Dome Field was definitely proved up as commercially productive by Standard Oil Co. several months ago when No. 6-29-V was completed flowing 1,000 bbls. of 35.6 gravity oil per day. No. 1 Burbank of the Petroleum Securities, the first project in the Middle Dome to reveal the existence of a substantial accumulation, has been standing shut in for approximately a year with a gas pressure of 2,850 pounds.

Lost Hills-Belridge

Associated Oil Co.'s No. 1 Williamson, a wildcat which the company is drilling in the Lost Hills Field of Kern County in conjunction with Richfield Oil Co., is in a gray sand showing oil at 5,575 feet. Several water tests have been conducted during the past 2,000 feet, but the water witch failed to warrant a production test. In the South Belridge Field of Kern County General Petroleum's No. 1 Berry is at 8,434 feet. This deep test was still in the brown shale at the close of the week with no indication that the bottom of the shale was in sight. As the company will probably be obliged to drill 1,000 feet below the bottom of the brown shale, it may be carried below the 10,000-foot level before a production test is made.

Ohio Oil Co. recently staked location for a wildcat in the bed of the Buena Vista Lake in Kern County and foundation for the rig is to be poured within a few days. The location appears to be favorable and the existence of a large structure has been revealed by seismological research. Union Oil Co. also contemplates the drilling of a wildcat in Kern County within a few weeks as tentative plans have just been completed for the initiation of wildcat exploration in the Union Avenue district. Union's projected test will be approximately midway between Fruitvale and Mountain View

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	August 26 — Total this week	August 26 — Daily average	August 19 — Total last week	August 19 — Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Fuel oil	63,958	9,137	.....	.....	859,419	.....
Diesel and gas oil	.....	.....	.....	.....	1,200,569	441,696
Gasoline	368,644	52,663	215,807	30,830	6,954,932	5,567,482
Kerosene	.....	.....	.....	.....	598,595	164,372
Foreign exports—						
Crude oil	383,180	54,740	275,364	39,338	4,989,675	5,536,612
Fuel oil	352,183	50,313	271,442	38,777	5,548,938	5,705,329
Diesel and gas oil	.....	.....	.....	.....	2,222,548	1,627,609
Gasoline	243,618	37,660	76,599	10,943	4,139,403	5,822,523
Kerosene	174,928	24,990	6,697	957	1,358,272	1,790,566
Naphtha distillates	.....	.....	.....	.....	.....	120,075
Coastwise-domestic—						
Crude oil	74,625	10,661	.....	.....	5,172,264	9,533,347
Fuel oil	210,962	30,138	116,659	16,951	6,583,874	7,374,417
Diesel and gas oil	.....	.....	16,640	2,377	821,145	854,627
Gasoline	184,071	26,296	228,352	32,607	8,368,585	10,491,848
Kerosene	.....	.....	11,351	1,632	139,937	117,494
Naphtha distillates	.....	.....	.....	.....	27,651	.....

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—							
Diesel and gas oil	.....	.....	.....	.....	.....	280,531	402,361
Gasoline	.....	.....	.....	.....	.....	702,977	572,391
Kerosene	.....	.....	.....	.....	.....	482,430	75,760
Lubricants	.....	.....	.....	.....	.....	24,366	22,829
Foreign exports—							
Crude oil	73,191	10,456	22,032	3,147	1,320,041	707,661
Fuel oil	102,504	14,643	176,270	24,324	739,549	644,719
Diesel and gas oil	59,286	8,484	125,166	17,881	524,450	519,332
Gasoline	58,869	8,410	72,534	10,405	2,996,797	2,282,463
Kerosene	.....	.....	.....	.....	578,378	744,030
Lubricants	19,998	2,857	21,003	3,000	76,963	38,054
Coastwise-domestic—							
Fuel oil	13,119	1,874	168,323	24,046	2,253,280	2,030,489
Diesel and gas oil	.....	.....	.....	.....	179,250	243,051
Gasoline	80,495	11,486	44,313	6,402	2,754,446	2,494,541
Kerosene	.....	.....	2,561	364	85,106	80,467
Lubricants	.....	.....	.....	.....	2,751	.....

Fields and in an area which looks promising based on the outcome of work conducted by the Western Gulf a few years ago. The Alta Oil Corp. is rigging up rotary equipment preparatory to starting drilling in the same district.

Mountain View

Shell Oil Co., barring the development of mechanical trouble, should finish No. 2 Porter Day in the Mountain View Field within 15 days. An offset to No. 1 Wharton of the Hogan Petroleum Co., it is in the pay a little below 5,700 feet and should be finished at approximately 5,850 feet. Shell's No. 2 Porter Day is practically certain of resulting in commercial production as it is within 600 feet of the discovery well. Bankline Oil Co. has been coring No. 1 Symons for the past 100 feet but has not found anything resembling commercial production. No. 1 Mott of Bankline Oil Co., which has just passed the 5,000-foot level, should reach the interesting stage within 30 days.

Two wells are scheduled for completion in the Mount Poso Field within 15 days, Bern Oil Co.'s No. 2 Glide and the Ekoh Oil Co.'s No. 2 Vedder being both in the pay. These wells are to be followed into production by Himovitz Oil Co.'s No. 2 in Section 21-27-28. Additional completions may also be anticipated in the Round Mountain district as three wells are drilling in that area. Golden Bear Oil Co. is making a water test on its No. 1 Rex in Section 6-28-29 and if a shutoff has been effected should drill into the pay within the next week.

San Miguelito

Continental Oil Co. started a production test on No. 2 Grubb in the San Miguelito Field of Ventura County early today but it will be another 24 hours before the status of this well is decided. No. 2 Grubb was swabbed in several hours ago but had not yet cleaned up and the success of the recement job has not been determined. This well was given a preliminary production test about two weeks ago but came in wet and necessitated a recement job on the 7-inch water string which was cemented through perforations at 7,298 feet. No. 2 Grubb, a few locations south and west of the discovery well, is substantially lower on the structure than No. 1 Grubb but should, nevertheless, be finished as a commercial producer. No. 1 Valensuela of Honolulu Consolidated, one location farther out on the structure than No. 2 Grubb, was abandoned a few weeks ago as a duster due to the unfavorable outlook. As an indication of an edge condition, No. 2 Grubb of the Continental missed the upper Grubb zone entirely and is being given a production test in the second Grubb zone.

General Petroleum killed No. 15-A Barnard, a deep well in the Ventura Avenue Field, and will probably recement the 6⅝-inch water string landed at 7,966 feet. This deep test was put on production a few weeks ago but the initial daily output, 7,100 bbls., showed a cut of approximately 40 per cent. No. 15-A Barnard was finished at 9,000 feet after having cored approximately 1,000 feet of exceptionally good looking oil sand. Shell Oil Co. will carry No. 77 Taylor into the deep 57 zone in the Ventura Avenue Field and is starting the well with a hole of large diameter. The 57 zone in the Ventura Avenue Field was discovered by Associated Oil Co. late in 1931 but operators have not shown any inclination to engage in deep zone exploitation up to the present. Honolulu Consolidated spudded in No. 6 on tideland permit No. 90 in the Elwood Field early in the week and this well, scheduled for completion in the Sespe formation, will probably be given a production test around the end of October. Signal Oil & Gas Co. is cleaning out No. 2 on tideland permit No. 98 at 3,686 feet, preparatory to carrying it to the Sespe. Pacific Western is extending the pier on permit No. 92 to permit construction of a well head for No. 11, which should begin making hole within 30 days. Standard Oil Co. picked up the top of the Vaqueros in No. 1 Chase & Bryce in the Goleta gas field of Santa Barbara County at 4,070 feet and landed an 8⅝-inch water string at 4,056 feet. This well has shown considerable gas and will be watched with interest as General Petroleum failed to find any oil on the More Ranch. The latter company has, however, completed three commercial gas wells on the More property and these projects will become of economic importance whenever the demand for gas exceeds the supply produced in oil fields. In the Point Concepcion district of Santa Barbara County, Monterey Exploration Co.'s No. 1 Hollister is at 2,288 feet, but it will probably be several weeks before it picks up the top of the Vaqueros.

Rosecrans

Myrwane Petroleum Co. has staked a location on the Bradford property in the Gardena Heights tract of the Rosecrans Field and rig construction is expected within 10 days. Barnsdall has plugged back No. 1 Trust in the Rosecrans Field from 6,729 feet to 6,693 feet and is cleaning out preparatory to conducting a production test. In the Dominguez Field, Union Oil Co. is rigging up No. 32 Callender and building new rigs for No. 33 Callender and No. 24 Hellman. Shell is also starting a little new work as a new rig is going up for No. 48 Reyes. Republic Petroleum has landed a 9-inch water string in No. 4 Childs at 4,301 feet and officials hope to develop commercial production by careful selective work. Republic Petroleum completed No. 1 Childs as a commercial producer several months ago after another company had quitclaimed the property and abandoned the well. Sunrise Petroleum, which is drilling a new well in the southern part of the field, is in a gray sandy shale at 4,805 feet without having logged any favorable indications. This well is approaching the critical depth, and should pick up the pay within the next 100 feet, if this location is to be productive.

Canadian Fields

(Continued from Page 55)

ished around 1,405 feet when it drilled into water. It was plugged back and shot, developing a production of around 35,000 feet a day. Harry Smith's test in Lot 3, Concession 15, Tilbury East got water at around 1,315 feet and has been plugged back to a gas sand yielding about 20,000 feet a day. This sand will likely be shot. Production will be taken by Southern Ontario Gas Co. Salina Oil & Gas Co.'s No. 4, Gifford farm, 1,200 feet west of No. 3 producer, is reported starting

In Raleigh Township, Kent County, Olga Oil & Gas Co.'s No. 7, Earl Flook farm, Lot 19, Concession 8, is reported drilling below 900 feet.

In Dawn Township, Lambton County, Union Gas Co.'s No. 67, Lot 24, Concession 9, is reported spudding in. Leo Wilson's No. 1, deep test, Lot 7, Concession 3, Sarnia Township, is reported shut down below 800 feet.

In Middlesex County, Union Gas Co.'s No. 4 Ekfrid, Lot 8, Range 2s, Ekfrid Township, is reported drilling below 1,480 feet without a show. A slight amount of water has been encountered. The test will be carried through the Trenton to the granite, probably finishing around 1,850 feet.

Deepen Essex Wildcat

In Essex County, Bon Jasperson's No. 1, wildcat test, in Lot 14, Concession 2, Maidstone Township, reported a failure at 1,410 feet, is being deepened for a test of the Trenton. It is now drilling between 1,700 and 1,800 feet. The Trenton at this point is thought to be nearer the surface than further north and east, in the Dover Field of Kent County. The Jasperson test at 1,385 feet had a small show of oil, estimated 1 bbl. a day with 5,000 feet of gas. At 1,410 feet salt water was met, when the hole was plugged back and the sand shot without increasing production.

Port Frank Test

At Port Frank, in Bosanquet Township, Lambton County, the Walker Oil & Salt Syndicate, headed by G. Walker, is drilling a test. Oil is looked for around 360 feet and salt brine at 1,000 feet. J. Sproul, of Oil Springs, is handling the drilling.

Eastern Fields

(Continued from Page 57)

SOUTHWEST PENNSYLVANIA

No producers were completed in Southwest Pennsylvania during the week. In Allegheny County, E. L. Oles completed a small gas well on the O. R. Degelman farm in Findley Township. In McCandless Township, O. Miller completed his second test on the John Noving farm in the 30-foot and it is a gas well. In Richland Township, E. A. Bream & Co. are drilling No. 4 on the John Poff farm and are down 1,500 feet.

In Washington County, Iams Oil & Gas Co. completed a second test on the I. W. Iams farm in the gas sand and has a small gas well. This is in South Franklin Township. In East Findley Township, Hallam and Lewis and others are down 1,550 feet on the H. D. Ely farm. In South Franklin Township, E. H. and J. B. Tague have reached 500 feet in No. 6 on the Adaline D. McKennan estate.

In Amwell Township, Washington County, two new tests are starting. Wise Oil & Gas Co. has made a location on the E. E. Roach farm east of its test on the M. Roach farm. Manufacturers Light & Heat Co. is rigging up on the Maggie I. Craft farm of 69 acres east of the E. E. Roach farm. The Roach farm appears west of the oil streak in the Fifth sand. Union Gasoline & Oil Co. is down 2,200 feet on the Leroy VanKirk farm.

In Greene County, Convex Glass Co. is drilling deeper its test on the Samuel Morse farm in Dunkard Township deeper. It is now 1,700 feet deep. In Center district, J. B. Orndoff has the material on the ground for a test on the W. H. Scott farm. In Perry Township, the Carnegie Natural Gas Co. is down 2,500 feet in drilling deeper the No. 1 on the L. Cowell farm.

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status—
Standard Oil Co., No. 1 Goleta, Santa Barbara Co.	20- 4-28	4,056	cemented
Monterey Expl. Co., No. 1 Pt. Conception, Santa Barbara	33- 5-33	3,288	sd. sh. drilling
Boisa Chica, No. 1 Coal Oil Point, Santa Barbara Co.	tideland	4,089	suspended
Meganos Oil Co., No. 1 Purisima, Santa Barbara Co.	28- 8-34	1,471	sd. sh. drilling
Cuyama Oil Co., No. 1 Cuyama, Santa Barbara Co.	12-10-27	2,387	suspended
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	7,509	br. sh. drilling
Bardeen Pet., No. 1 Fillmore, Ventura Co.	13- 4-19	3,151	O. S. drilling
Hancock Oil Co., No. 1 Fillmore, Ventura Co.	13- 4-14	2,360	hd. sd. drilling
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1- 4-19	....	road
Los Cerritos Pet., No. 1 South Mountain, Ventura Co.	17- 3-20	mtl.	building rig
Kneiper & Atlas, No. 1 Bardsdale, Ventura Co.	7- 3-19	501	gr. sd. drilling
Williamson & Donaher, No. 1 Simi, Ventura Co.	36- 3-18	660	sd. sh. drilling
Dabney, H. R., No. 1 Simi, Ventura Co.	22- 3-18	1,000	suspended
Continental, No. 3 Miguelito, Ventura Co.	23- 3-24	7,926	recemented
C. C. M. O., No. 3-A Miguelito, Ventura Co.	23- 3-24	4,166	suspended
Midlands Pet., No. 1 Ojai, Ventura Co.	9- 3-23	7,841	redrilling
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co.	26- 4-21	2,198	suspended
Kirk, W. A., No. 1 Sulphur Mountain, Ventura Co.	21- 4-21	297	hd. sd. drilling
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	22- 4-21	1,498	br. sh. drilling
Las Posas Pet., No. 1 Las Posas, Ventura Co.	32- 3-20	5,000	suspended
International Oil Developers, No. 1 Conejo, Ventura Co.	33- 2-20	2,804	hd. sd. drilling
Hub Pet. Co., No. 1 Gould Hills, Kern Co.	22-29-21	6,840	suspended
Purman, T. H., No. 2 Gould Hills, Kern Co.	27-29-21	335	suspended
Casa Mira Oil Co., No. 1 Belridge, Kern Co.	29-28-20	4,471	hd. sd. drilling
General Pet., No. 1 Belridge, Kern Co.	30-28-21	8,476	br. sh. drilling
Cumberland Oil Co., No. 2 Devil's Den, Kern Co.	17-26-18	3,270	suspended
Lincoln Pet., No. 1 Devil's Den, Kern Co.	19-26-18	3,172	suspended
Hanna, Tom, No. 1 Devil's Den, Kern Co.	25-26-18	3,516	suspended
Pyramid Hills Oil Co., No. 1 Devil's Den, Kern Co.	24-26-18	4,140	cleaning out
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19	3,170	suspended
Associated, No. 1 Lost Hills, Kern Co.	2-26-20	5,589	gr. sd. drilling
Howells Bros., No. 1 Round Mountain, Kern Co.	32-28-29	1,131	hd. sh. drilling
Keno Pet. Co., No. 1 Lerdo, Kern Co.	14-29-27	4,531	suspended
Ohio Oil Co., No. 1 Buena Vista Lake, Kern Co.	....	....	location
Caravel Pet. Co., No. 1 Edison, Kern Co.	19-30-30	1,801	suspended
Alta Oil Co., No. 1 Union Avenue, Kern Co.	6-30-28	rig	rigging up
Shell Oil Co., No. 2 Mountain View, Kern Co.	29-30-29	5,717	O. S. drilling
Hogan, Dana, No. 3 Mountain View, Kern Co.	29-30-29	2,692	sd. drilling
Bankline Oil Co., No. 1 Mountain View, Kern Co.	4-31-29	5,301	br. sh. drilling
Barnsdall Oil Co., No. 1 Mountain View, Kern Co.	31-30-29	5,040	hd. sh. drilling
Long Beach Pet., No. 1 Mountain View, Kern Co.	29-30-29	4,371	sd. sh. drilling
Mohawk Pet., No. 1 Mountain View, Kern Co.	30-30-29	5,958	suspended
Mohawk Pet., No. 2 Mountain View, Kern Co.	30-30-29	4,823	sd. sh. drilling
Mohawk Pet., No. 3 Mountain View, Kern Co.	30-30-29	rig	rigging up
Comanche Oil Co., No. 1 Comanche, Kern Co.	15-32-29	rig	suspended
Badger Oil Co., No. 1 Wheeler Ridge, Kern Co.	31-11-19	4,483	O.&G. showing
Gatton & Luethe, No. 1 Madera, Madera Co.	22-10-17	2,398	suspended
Russ Oil Synd., No. 1 Kingsburg, Fresno Co.	20-12-21	2,709	cemented
Bergman, Harry, No. 1 Kingsburg, Fresno Co.	12-12-21	4,159	suspended
Graham & Loftus, No. 1 Raisin City, Fresno Co.	20-15-18	5,906	suspended
Emerich Oil Co., No. 1 Mendota, Fresno Co.	35-13-13	3,820	suspended
Western Gulf, No. 1 B. P., Fresno Co.	3-17-16	4,816	sd. sh. drilling
Hogan, Dana, No. 1 Joaquin Ridge, Fresno Co.	28-20-16	6,605	suspended
Superior Oil Co., No. 1 Jacalitos, Fresno Co.	6-22-16	3,269	sd. sh. drilling
Kent & McDonald, No. 1 Garrizo Plains, S. Luis Obispo Co.	3-32-22	3,830	suspended
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-27-11	4,191	suspended
Guess, E. B., No. 1 Corcoran, Kings Co.	7-21-21	6,197	suspended
Brown, A. M., well No. 3, Kings Co.	10-22-19	1,205	suspended
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-22-17	6,873	suspended
Magee & Stone, No. 2 Alpaugh, Kings Co.	33-23-22	3,149	plug 2,710
Cardinal Oil Co., No. 1 Los Banos, Merced Co.	28-10- 9	rig	rigged up
Merced Oil & Gas, No. 1 Chowchilla, Merced Co.	1- 9-14	rig	suspended
Na-Pa Oil Co., No. 1 Griffith, Napa Co.	7- 5- 3	2,750	br. sh. drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	5- 2-10	4,815	redrilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo County	13-13- 3	5,188	gr. sd. drilling
Buttes Oilfields Co., No. 1 Marysville, Sutter Co.	35-16- 4	2,731	gas, shut in
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	34-16- 1	3,701	sd. sh. drilling
Tehama Pet. Co., well No. 1, Glenn Co.	4-22- 5	4,696	cemented
Orland Synd., No. 1 Orland, Tehama Co.	31-23- 3	3,748	suspended

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status—
Palm Ridge Oil Co., No. 1 Palms, Los Angeles Co.	2- 2-15	6,780	sd. sh. drilling
Kupfer, A. M., No. 1 Inglewood, Los Angeles Co.	17- 2-14	5,863	suspended
Pacific Gulf, No. 1 Athens, Los Angeles Co.	18- 3-13	6,094	suspended
Pacific Dev. Co., No. 1 Wilmington, Los Angeles Co.	16- 3-13	rig	rigging up
Pacific Oil Inv. Co., No. 1 Van Nuys, Los Angeles Co.	23- 4-15	3,640	cleaning out
Sunrise Pet. Co., No. 1 Dominguez, Los Angeles Co.	3- 4-13	4,804	hd. sd. drilling
Oakes & Mead, No. 1 Lyndwood, Los Angeles Co.	31- 2-13	4,940	cleaning out
Celito Oil Co., No. 1 Monterey Park, Los Angeles Co.	25- 1-12	5,219	hd. sd. drilling
Community Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	5,281	repair rig
Universal Consd., No. 1 Montebello, Los Angeles Co.	5- 2-11	7,010	1,000 B/D
Nance, M. K., No. 1 Montebello, Los Angeles Co.	6- 2-11	mtl.	building rig
Andrus & Hutcheson, No. 1 El Monte, Los Angeles Co.	11- 1-11	1,792	suspended
Signal Pet., No. 1 Puente, Los Angeles Co.	14- 2-10	4,908	plug back
Willetts Pet., No. 1 Saugus, Los Angeles Co.	35- 5-16	2,074	suspended
Alpha Oil Co., No. 1 Calabasas, Los Angeles Co.	22- 1-18	1,199	suspended
Ball, W. T., No. 1 Newhall, Los Angeles Co.	34- 3-16	3,582	suspended
Big Four Oil Co., No. 1 Newhall, Los Angeles Co.	32- 4-16	3,230	suspended
Marble, Willard, No. 1 Van Nuys, Los Angeles Co.	6- 2-16	3,761	sd. sh. drilling
Plymouth Oil Co., No. 1 West Coyote, Los Angeles Co.	24- 3-11	2,153	cong. drilling
Vaqueros Major Oil Co., No. 1 Huntington, Orange Co.	tideland	mtl.	build. pier
Nuoli Co., No. 1 Newport, Orange Co.	29- 6-10	4,289	hd. sd. drilling
Mineral Exploration, No. 1 Capistrano, Orange Co.	8- 8- 7	4,302	suspended
Saddleback Oil Co., No. 1 El Toro, Orange Co.	3- 6- 7	80	suspended
Placentia Dev. Co., No. 1 Placentia, Orange Co.	31- 3- 9	706	sd. sh. drilling
Brown, W. F., No. 1 Atwood, Orange Co.	26- 3- 9	rig	rigged up
Spindle Top Oil Co., No. 1 Salton Sea, Riverside Co.	25- 7-10	3,580	cleaning out
Great American Pet., No. 1 Chino, San Bernardino Co.	18- 2- 8	2,680	hd. sd. drilling
Great American Pet., No. 2 Chino, San Bernardino Co.	18- 2- 8	1,279	reaming
McCarthy, C. F., No. 1 Chino, San Bernardino Co.	14- 3- 6	803	sd. sh. drilling

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 51)

Hirschfield-Bailey Interests' No. 1 Mickie, 660 ft. N and E, SW cor. SE Sec. 7-13-13 ..... S.D. chalk 1,170 ft.
N. B. Porter's No. 1 J. W. Porter Est., 330 ft. N and E, SW cor. SE SE Sec. 33-13-13 ..... Coring sand 1,127 ft.

EAST CARROLL PARISH

Marr & Collins' No. 1 Desha Lbr. Co., NW Sec. 42-21-12.. Rig up.

SABINE PARISH

A. F. Allen's No. 1 G. W. Belton, NE cor. NW NW Sec. 33-9-13 ..... S.D. fuel 400 ft.

CONVERSE DISTRICT

A. G. Craig's No. 1 Belton, 330 ft. N and E, SW cor. NW NW Sec. 33-9-13 ..... Derrick.
Mamie S. Hammond's No. 1 Patrick, 330 ft. N, 2,310 ft. W, SE cor. Sec. 1-9-13 ..... T.A. 3,235 ft.
Helena O. & G. Co.'s No. 1 C. Jackson, 330 ft. S and W, NE cor. SW SW Sec. 10-9-13 ..... S.D. 1,000 ft.
Lambert et al's No. 1 Edwards, 300 ft. S and E, NW cor. SW NW Sec. 29-9-13 ..... Using acid 2,000 ft; T.D. 3,360 ft.
H. C. Lesinger's No. 1 Bowman-Hicks Lbr. Co., 338 ft. S and E, NW cor. SW Sec. 13-9-13 ..... S.D. 3,185 ft.
Joe Modisette's No. 3 Frost Lbr. Industries, 330 ft. S and E, NW cor. NE SW Sec. 16-9-13 ..... S.D.; W.O. 3,190 ft.
C. L. Nixon's No. 1 Patrick, 330 ft. S and E, NW cor. NE SW Sec. 21-9-13 ..... Tested dry; W.O.; T.D. 1,575 ft.
Robertson Drlg. Co.'s No. 1 Bowman-Hicks Lbr. Co., 330 ft. S and E, NW cor. NW NW Sec. 23-9-13.... Cmtd. 6⅝-in. 1,564 ft.; T.D. 1,604 ft.
Sabine Royalties Co.'s No. 1 Balew & Carter, 330 ft. N and E, SW cor. NW SW Sec. 31-9-13 ..... Drlg. 2,008 ft.
E. M. Self's No. 1 G. I. Paul, 330 ft. N and W, SE cor. NE SW Sec. 2-9-13 ..... Drlg. 1,313 ft.
Homer Tyson's No. 1 G. W. Hough, 330 ft. S and E, NW cor. SW NW Sec. 31-9-13 ..... Rig up.
Windson O. & G. Co.'s No. 1 Barr, 330 ft. E, 990 ft. N, SW cor. NW Sec. 15-9-13 ..... Rigging up.
Windsor Oil Co.'s No. 3 Barr, 330 ft. N and E, SW cor. NW Sec. 15-9-13 ..... Location.

Arkansas

ARKANSAS COUNTY

Allen & Wright's No. 1 C. P. Trice, SE cor. NW SW SE Sec. 9-2s-3w ..... Derrick.

COLUMBIA COUNTY

C. W. Alworth et al's No. 1 W. D. King, SW cor. SE SW Sec. 16-17-20 ..... S.D. 1,864 ft.

JEFFERSON COUNTY

J. E. Elliott's No. 1 B. V. Nevin, 440 ft. N and E, SW cor. SW NW Sec. 26-4-10 ..... Derrick.
R. V. Harrell et al's No. 1 McGoughey, NW cor. Sec. 23-7-10 ..... S.D. 1,550 ft.

HEMPSTEAD COUNTY

Kentucky O. & G. Co.'s No. 1 Leslie, NW cor. SW NW Sec. 21-9-26 ..... Derrick.

LAFAYETTE COUNTY

Geo. W. Harper's No. 1 Reed-Bodcaw, NW cor. Sec. 16-15-22 ..... Coring wtr. sand 2,414 ft.

LONOKE COUNTY

Joe D. Strahan's No. 1 Hardin, NW cor. NW NW Sec. 13-2s-7 ..... Rig up.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 2 Beck, 330 ft. S and E, NW cor. SE SW Sec. 34-15-26 ..... S.D. 500 ft.
Claude English et al's (was Tarkington et al's) No. 1 Gibson, 1,980 ft. N, 660 ft. E, SW cor. Sec. 30-18-27.. S.D. 300 ft.

OUACHITA COUNTY

J. D. Reynolds' No. 1 Snow Hill Baptist Church, 525 ft. E, 115 ft. S, NW cor. SE SW Sec. 28-15-15..... S.D. 1,460 ft.

POINSETT COUNTY

Ark. State O. & G. Co.'s No. 1 fee, C NE NE Sec. 13-11-3e ..... Derrick.

NEVADA COUNTY

Longoria et al's No. 1 Dick Gulley heirs, Sec. 2-13-20.... Began drlg. July 5 and S.D.

Mississippi

JONES COUNTY

Snow-Black Pet. Co.'s No. 1 Watson, 600 ft. W, 210 ft. S, center, Sec. 34-7-13 ..... Drlg. shale 2,930 ft.

LAMAR COUNTY

Lamar Oil Co.'s No. 1 Scott, NE NE Sec. 18-3n-14..... S.D. 3,010 ft.

MADISON COUNTY

H. A. Wilson,tr.'s No. 1 Copex, 200 ft. N and E, SW cor. SW NE Sec. 34-9-3e ..... Began Drlg. Aug. 13; drlg. 235 ft.

NEWTON COUNTY

Bob Dalton et al's No. 2 Majure, SE SE Sec. 25-6-11 ... Rig up.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, Sec. 34-2n-9e, SW cor. SW SE ..... Derrick pattern.

WARREN COUNTY

Orbet Drlg. Co.'s No. 1 R. L. Parker, 300 ft. E, CWL, Sec. 14-14-1e ..... Rig up.

Louisiana-Arkansas Proven Areas

North Louisiana

CADDO—BETHANY

Company, well, farm name, section and block—	Remarks:
Tom Collins Pet. Co.'s No. 1 Gill & Lipscomb, 660 ft. N, 1,886 ft. E, SW cor. Sec. 17-16-16	Derrick.

CADDO PARISH—BLANCHARD

Calatex O. & G. Co.'s No. 1 G. M. Agura, Sec. 9-16-16.... Cmtd. 4½-in. 2,805 ft.; T.D. 2,997 ft.

CADDO—RODESSA

Ark. La. P. L. Co.'s No. 1 Williams & Windham, Sec. 4-23-14, 660 ft. S, 660 ft. E, NW cor. NE NW ..... Coring 5,590 ft.
United Gas Public Service Co.'s No. 1 Festervan, Sec. 28-23-14, 1,980 ft. N, 1,320 ft. E, SW cor. ..... Coring shale 5,430 ft.

DE SOTO PARISH

Tom McKinney et al's No. 1 J. M. Nabors, 330 ft. N and E, SW cor. SE SE Sec. 26-12-12 ..... Rig up.

MOREHOUSE PARISH

United Gas Public Service Co.'s No. 29 Crossett Lbr. Co., 661 ft. E, 660 ft. N, SW cor. SW SW Sec. 17-22-5 ..... Began drlg. Aug. 24; 13-in. 157 ft.; 9-in. 870 ft.

United Gas Public Service Co.'s No. 30 Crossett, Sec. 25-22-4e ..... Cmtd. 6⅝-in. 2,168 ft.; used acid 2,216 ft.; arranging test.

United Gas Public Service Co.'s No. 3 Patton, 3,375 ft. S, 2,917 ft. E, NW cor. Sec. 13-20-11 ..... Waiting on gauge; T.D. 2,212 ft.

OUACHITA PARISH

Century Carbon Co.'s No. 3 McGee, 330 ft. S, 4,667 ft. E, NW cor. Sec. 10-18-4 ..... Cmtd. 6-in.

RED RIVER PARISH

E. M. Thompson's No. 1 T. J. Crichton, SW SE Sec. 17-13-10 ..... Drlg. 1,700 ft.

SABINE PARISH—ZWOLLE

D. D. Alexander's No. 2 Cooper, 660 ft. S, 330 ft. W, NE cor. NW NE Sec. 31-8-11 ..... Began drlg. Aug. 27; 10-in. 40 ft; drlg. 700 ft.
Baird Bros.' No. 1 Trammell, 660 ft. N, 330 ft. W, SE cor. NE Sec. 30-8-11 ..... S.D.; W.O. 2,550 ft.
J. C. Chandler's No. 1 Rains, SW cor. NW Sec. 14-7-11.. Began drlg. Aug. 21; 10-in. 42 ft.
Cummings Oil Co.'s No. 1 T. M. Phillips, 330 ft. N, 462 ft. W, SE cor. NE ..... Bailing 2,429 ft.
Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 24-7-13 ..... Derrick.
Feazell & Davenport's No. 1 Aaron, 250 ft. S and E, NW cor. Sec. 35-9-13 ..... S.D. 1,973 ft.
P. A. Flannery's No. 1 Stille, 660 ft. W, 295 ft. N, SE cor. NE SW Sec. 26-8-13 ..... S.D. 1,910 ft.
Investors Prod. Co.'s No. 1 S. J. Williams, 660 ft. E and S, NW cor. Sec. 24-7-11 ..... W.O.S.R. 2,805 ft.
T. B. Kelly's No. 1 McClanahan, 1,000 ft. S, 330 ft. E, NW cor. SW NW Sec. 36-8-11 ..... S.D.; repairs 1,230 ft.
Lowery & Green's No. 1 Adair, 330 ft. N and W, SE cor. SE SW Sec. 19-8-11 ..... Drlg. 1,400 ft.
Magnolia Pet. Co.'s No. 2 J. M. Cook, 330 ft. S, 330 ft. W, NE cor. NE SW Sec. 30-8-11 ..... Derrick.
Pelican Nat. Gas Co.'s No. 21 La. Long Leaf Lbr. Co., 660 ft. N, 568 ft. W, SE cor. SE SW Sec. 3-7-11..... Dry; W.O. 2,700 ft.
Pelican Nat. Gas Co.'s No. 22 La. Long Leaf Lbr. Co., 330 ft. S and E, NW cor. SW NE Sec. 8-7-11..... Rig up.
Pelican Nat. Gas Co.'s No. 24 La. Long Leaf Lbr. Co., 330 ft. N and E, SW cor. Sec. 5-7-11..... Cmtd. 7-in. 2,360 ft.; bailing 2,446 ft.
H. C. Pitts' No. 1 Trammell 330 ft. N and E, SW cor. NW NE Sec. 8-7-11 ..... Derrick.
Pugh-Hickman Drlg. Co.'s No. 1 Stille (No. 1 drilled as No. 2), 330 ft. S and W, NE cor. SE SE Sec. 16-7-11 ..... Began drlg. Aug. 24; 10-in. 40 ft; top marl 2,440 ft; cmtd. 6-in. 2,235 ft; T.D. 2,435 ft.
People's O. & G. Co.'s No. 1 Raines, 330 ft. N, 100 ft. W, SE cor. NE Sec. 15-7-11 ..... Derrick.
H. Reeves et al's No. 1 Ponder, 330 ft. N and W, SE NW Sec. 15-7-11 ..... Cmtd. 6-in 2,317 ft.
Rig Oil Co.'s No. 1 Walden, 330 ft. N and E, SW cor. NW NE Sec. 28-8-13 ..... Derrick.
L. J. Tillery's No. 1 Sabine Lbr. Co., 800 ft. S, 330 ft. W, NE cor. Lot 3, La. Nava grant, Sec. 5-7-11..... Location.
C. H. Tuttle's No. 4 Byrd, 800 ft. S, 930 ft. E, NW cor. NW NW Sec. 7-7-10 ..... Derrick.

Arkansas

UNION COUNTY—URBANA

Wilson & Chapman's No. 1-B Hadley, Sec. 3-18-13..... O.W.D.D.; drlg. plug; T.D. 3,650 ft.

Mississippi

HINDS COUNTY

Atkins & Hightower's No. 1 Woodland Hills, 400 ft. W, 427 ft. N, SE cor. NW NE Sec. 26-6-1e ..... Cmt. 8-in. 770 ft; drlg. 2,150 ft.

RANKIN COUNTY

Jas. A. Alexander, tr.'s No. 2 Love Pet. Co., 720 ft. S, 63 ft. E, C Sec. 36-6-1e ..... Rig up.
J. A. Alexander, tr.'s No. 1 Love Pet. Co., 600 ft. W, 240 ft. S, NE cor. NW NE Sec. 1-5-1e ..... Drlg. sand 2,195 ft.
Jas. A. Baker et al's No. 1 Hawkins, 440 ft. E, 523 ft. N, SW cor. SE SW Sec. 21-6-2e ..... Derrick.
Ferguson, Fuller & Metz' No. 1 Ammons, 350 ft. E and S, NW cor. NW NW Sec. 35-3n-3e ..... Derrick.
Muse & Muse's No. 1 Carlton, Sec. 13-5n-1e, 650 ft. E, 725 ft. N, SW cor. ..... Cmtd. 6-in. 2,407 ft.

EAST TEXAS (Border Counties)

MARION COUNTY

Terry et al's No. 1 E. B. Colgin, 300 ft. N and E, SW cor. Martin Noll Sur. ..... Derrick.

PANOLA COUNTY

W. H. Nichols et al's No. 1 S. W. Ray, 330 ft. S of N line, 330 ft. W of E line, W. P. Culver Sur. ..... Derrick.
M. H. Robbins et al's No. 1 Alzee Williams, 165 ft. N and E, SW cor. 30-ac. tract in Winnie Mann Sur. .. Derrick.

Wildcat Operations in Southwest Texas

(Continued from Page 52)

Earl A. Post's No. 2 J. F. and F. X. Bilharts, 150 ft. from N and E lines of S 200 acres of 335-ac. tract in F. Boles Sur. ..... Moving in rig.
Roe & Day's No. 2 City Nat'l. Bank, 150 ft. from N and W lines of tract in I. Peres Sur. No. 15 ..... T.D. 260 ft.; drlg.
C. A. Smith's No. 1 Palfrey ..... Showing some oil.
C. A. Smith's No. 1 Henry Lamb, 750 ft. from N and E lines of Lamb farm, in de la Garza grant ..... T.D. 480 ft.; drlg.
F. E. Tegler's No. 1 Brackenridge, 578 ft. from S line, 2,284 ft. from W line of tract in Maria Gertrudis de Alaniz Sur. ..... T.D. 1,210 ft.; drlg.; shows paraffin in cuttings.

BLANCO COUNTY

Blanco Development Co.'s (McGee) No. 1 A. J. Dittmar, 1,320 ft. from S line, 150 ft. from W line of George Evans Sur. No. 58, 4 miles NW of Johnson City ..... T.D. 680 ft. in lime; fishing.
Isham et al's No. 1 Lester ranch, 200 varas from N and E lines of Antonio Bandrand Sur., 5 miles NE from Johnson City ..... T.D. 325 ft.; drlg. lime.

CALDWELL COUNTY

Judge R. L. Batts' No. 2 Roebuck, 2,400 ft. from NE line, 1,200 ft. from SE line of tract in Arthur Swift Sur. ..... T.D. 2,196 ft.; standing 60 ft. in oil after acid treatment.
E. L. Hope and Joe Cole's No. 1 Mike August, 150 ft. from NE line, 165 ft. from NW line of tract ..... T.D. 1,960 ft.; coring Taylor marl; showing gas
F. L. Thomson's No. 2 Lawler, 150 ft. from NW line, 450 ft. from SW line of road in J. H. Lawler 134-ac. tract in James Berry Sur. ..... Moving in rig.

DE WITT COUNTY

C. B. Bunte, Inc.'s No. 1 Emil Buckhorn, SE cor. of 120-ac. tract in Andrew Lockhart Sur., 2 miles SW from Lindeneau ..... Set surface csg.
L. G. Wade's No. 1 fee, 6 mi. S from Yoakum, 520 ft. from NW line, 160 ft. from SW line of 35-ac. tract in Lavina Dunbar Sur. ..... T.D. 2,357 ft.; S.D.

DIMMITT COUNTY

Ed Anglin's No. 1 Dr. A. J. Fitch, 930 ft. from NW line, 2,100 ft. from SW line of Sec. 4 in F. Proctor Sur. ..... T.D. 1,420 ft.; standing.

DUVAL COUNTY

T. J. Conway and C. A. Campbell's No. 1 W. K. Hoffman, 300 ft. from NW line, 1,650 ft. from NE line of Sur. No. 114 ..... T.D. 2,750 ft.; drilled plugs; running tubing; to swab in Friday.
DeSoto Oil Co.'s No. 2 Wood-Welder, 660 ft. E of No. 1 (950 ft. from N line, 2,640 ft. from W line of Sur. No. 211 ..... T.D. 2,502 ft.; P.B. to 2,156 ft.
Eaton et al's No. 1 Herbst, 1,650 ft. from E line, 330 ft. from S line in S.A.&M.G. Sur. No. 71 ..... Comp. water well; getting ready to spud in.
O. W. Killam's No. 1 Wood-Welder, 2,260 ft. from E line, 2,540 ft. from S line of Sur. No. 102 ..... T.D. 1,500 ft.; drlg.
S. S. & H. Oil Co.'s No. 1 Hunter, 330 ft. W of CEL of J. Poitevant Sur. No. 515 ..... T.D. 1,965 ft.; standing.
W. A. Smith's No. 1 Holzapfel, west central part of lease in 900 ft. W of NE cor. of Sur. 344 and 150 ft. from N line of Sur. No. 42 ..... T.D. 285 ft.; set surface csg.; W.O.C.
Almer Stewart's No. 1 Parr, 350 ft. from E line, 200 ft. from S line of 500-ac. tract in Poitevent Sur. No. 185 ..... Rigged up.
Whitting's No. 1 Duval County Ranch Co., 1,511 ft. from S line, 2,148 ft. from W line of Blk. 21, of Sur. No. 196 ..... T.D. 180 ft.; drlg.

FRIO COUNTY

Amerada Pet. Corp.'s No. 1 Frank Doering, 34 ft. from W line, 1,700 ft. from S line of Tract No. 7 in Maria Louisa Carranza Sur. No. 302 ..... T.D. 4,115 ft.; drlg.

J. E. Greenlee's No. 2 Burns, 150 ft. from W line, 1,900 ft. from S line of SE of 160-ac. tract, Castro Sur. No. 128 ..... T.D. 2,365 ft.; cored shale.

GILLESPIE COUNTY

Powers et al's (Nixon-Dore) No. 1 Andrew Lindig, 18 mi. E of Fredericksburg ..... T.D. 1,194 ft.; fishing.

GUADALUPE COUNTY

Clint Lanier's No. 1 L. D. Hill, 450 ft. from NW line, 1,450 ft. from NE line of George Allen Sur. ..... T.D. 610 ft.; S.D.

HIDALGO COUNTY

Carl & Johnston's No. 1 Doughty, 187 ft. from S and E lines of Lot 11, Blk. 8 of Subd. of Indios Ranch Sur. in N. Hidalgo ..... T.D. 3,040 ft.; S.D.

Chancellor & Hall's No. 1 Garcia Land & Cattle Co., 150 ft. from W line of Porcion 42 and 150 ft. N of old Military Highway ..... T.D. 3,187 ft.; drill stem test; showed 28 thribbles oil and salt water.

Maxwell & Young's No. 1 King, 175 ft. from N and E lines of Lot 3, Blk. 16, Alamo tract ..... T.D. 875 ft.; drlg.

JIM HOGG COUNTY

Brooklyn Oil Co.'s No. 1 De La Garza, 660 ft. from N and W lines of Blk. 87 of Pippins Subd. of Randado Grant Sur. ..... T.D. 300 ft.; drlg.

D. C. DeWitt's No. 1 A. G. Lopez, 3,475 ft. from W line, 425 ft. from N line of Sur. No. 106 ..... T.D. 1,717 ft.; drlg.

KENDALL COUNTY

E. W. Martin's No. 1 Houston, in F. Wright Sur. ..... T.D. 1,313 ft.; standing.

KERR COUNTY

J. E. Anderson's No. 1 J. D. Witt, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 1,933, in Hamilton Sur., 4 miles S of Center Point ..... T.D. 1,885 ft.; standing in shale and sand.

Evans & Gant's No. 1 Love, 660 ft. S of S line of Sur. 1,597, 1,320 ft. from W line of Sur. 1,594 ..... T.D. 4,060 ft.; rigging up to deepen.

Van Duyn & Moore's No. 1 Nowlin, 2,000 ft. from E line, 2,200 ft. from N line of Jas. R. Bettner Sur. No. 99 ..... T.D. 924 ft.; resumed drlg.

LA SALLE COUNTY

Pacific Gulf Oils and C. B. Bunte's No. 1 Lastinger, C of NE of Sec. 507 ..... T.D. 1,975 ft.; coring.

W. H. Wallace's No. 1 H. C. Yeager, 150 ft. from S and E lines of Sur. No. 95 ..... T.D. 1,580 ft.; standing.

LIVE OAK COUNTY

Coquat, O'Neill & Phillips' No. 3 Sanger, 2,930 ft. from SW line, 330 ft. from SE line of Sur. No. 350..... T.D. 2,175 ft.; drlg.

J. H. Durbin's No. 2 Marbach, 1,000 ft. from S line, 3,200 ft. from W line of S. Hays Sur. ..... T.D. 900 ft.; swabbing water and oil.

Holland Oil Co.'s No. 1 T. J. Lynn, 175 varas from E line, 54 varas from N line of 272-ac. tract in Sur. No. 171 ..... Spudded in.

M. P. Howard's No. 1 Alexander, 2,700 ft. from N line, 150 ft. from E line of 500-ac. tract, 3 miles NE of Calliham ..... T.D. 1,211 ft.; S.D.

MAVERICK COUNTY

Wright & Stroman's No. 1 DeBona, SE cor. of No. 1.... T.D. 740 ft.; moved off Ry. to new location.

McMULLEN COUNTY

John V. Edwards' No. 1 J. T. Brown, 150 ft. from river, 150 ft. from NW cor. of Brown tract, E from Calliham ..... T.D. 1,130 ft.; dry and abnd.

McDowell & Vierson's No. 1 Jefferson, 330 ft. from N, 990 ft. from W line of 640-ac. tract in Sur. No. 92.. Drlg. 2,250 ft.

S. R. & C. Oil Corp.'s No. 1 Reeves, 1,650 ft. from S line, 330 ft. from E line of Francis Smith, No. 4 Sur. ..... T.D. 2,273 ft.; abnd.

J. S. Suttle's No. 1 Lark, 150 ft. from N and W lines of Blk. 16, in E. W. B. Scrugham Sur. ..... T.D. 1,030 ft.; set csg.

Whisenant & Trenchard's No. 1 Martin, 1,650 ft. to E line, 2,310 ft. to S line of Sur. No. 108 ..... Spudded in.

MILAM COUNTY

Ed Clark et al's No. 1 Thomas Graves, 250 ft. from SW and NW lines of Jackson Hall Sur. ..... T.D. 890 ft.; shut down in shale.

Clark et al's No. 1 Hoppe, 450 ft. from NE line and 450 ft. from SE line of E. Hoppe 60-ac. tract in Juan Jose Acosta Sur. ..... T.D. 1,320 ft.; fishing.

SAN PATRICIO COUNTY

George W. Scruggs' No. 1 Collins, 1,040 ft. from NE line, 700 ft. from SE line of Blk. 36, E. J. McGloin Sur. ..... T.D. 2,756 ft; changing to heavier rig.

STARR COUNTY

B.&H. Oil Co.'s No. 1 Crown Brick & Tile Co., 1,800 ft. S of State Highway No. 4 and 580 ft. from W line of Porcion 87, near La Puerta ..... T.D. 4,560 ft; fishing.

W. P. Chancellor's No. 1 A. Guerra, 36,000 ft. from S line, 2,400 ft. from E line of Share No. 6 of San Jose Grant Sur., NE cor. of county ..... T.D. 2,905 ft.; drlg.

Great Plains Oil Co.'s No. 1 Sanchez, 660 ft. from W line, 330 ft. from S line of SE NW of Sur. No. 344 .. T.D. 2,350 ft.; drlg.

Goodwin & Yantis' No. 1 Kelsey Bass, 150 ft. from S and E lines of Blk. 8, Coast C. & G. Subd. of Secs. 2 and 3, Porcions 86-87 ..... Rigging up for 3,500-ft. test.

Goodwain & Yantis' No. 1 Seabury, 150 ft. from S and W lines of Sec. 107, Share No. 1, Porcion No. 107.... T.D. 2,095 ft.; drlg.; depth reported an error.

K. D. Harrison's No. 1 Garcia, 4,013 ft. from S line, 330 ft. from W line of Share 216, Porcion 90, jurisdiction Camargo ..... Rigging up.

R. D. Perkins & Hoffman's No. 1 E. A. Peffler, 3,050 ft. from W line, 2,480 ft. from S line of Sur. 933.. T.D. 55 ft.; spudded in; standing.

W. R. Shankle's No. 1 Garcia, 150 ft. from SW and NW lines of Blk. 33, Subd. N of Porcion No. 90.... Rigging up for 3,500-ft. test.

TRAVIS COUNTY

Franklin et al's No. 1-A Reimers, 1,200 ft. from SE line, 1,600 ft. from most southerly SW line of Sur. No. 55 ..... T.D. 500 ft. in shale; setting 500 ft. of 6-in.

Holdin's No. 1 D. V. Collins, 6,192 varas from SE line, 10,440 varas from SW line of Santiago de Valle Grant Sur. ..... T.D. 865 ft.; abnd.

Watson, Johnson & Brady's No. 2 Brady ..... T.D. 1,250 ft.; drlg. lime.

Weaver & Osborn's No. 1 Will Reinhardt, 300 ft. from NW line, 1,200 ft. from NE line of Will Reinhardt 100-ac. tract in William Lewis, Jr., Sur. 2.... T.D. 212 ft.; drlg. shale.

UVALDE COUNTY

Evans & Thompson's No. 1 Farris, 400 ft. from S and W lines of 635-ac. tract near center of John J. Hammond Sur. ..... T.D. 460 ft.; in chalk.

John Roberts' No. 3 Kincaid ..... T.D. 885 ft.; standing.

WEBB COUNTY

E. B. Madden's No. 1 Bruni, 150 ft. from E line, 330 ft. from S line of 105-ac. tract in Sur. No. 2,241.... Rigging up.

Danvers & Harrison's No. 1 Benavides, 2,490 ft. from E line, 2,497 ft. from S line of Sur. No. 669 ..... T.D. 2,340 ft.; coring.

Edwin M. Jones' No. 3 Callaghan, 330 ft. from S and E lines of C.C.S.D.&R.G.N.G. R.R. Sur. No. 1,211.... Rigged up and standing.

Merle Gunby's No. 1 A. M. Bruni, 1,252 ft. from W line, 328 ft. from S line of Sur. No. 357 ..... Drlg. wtr. well.

KENNEDY

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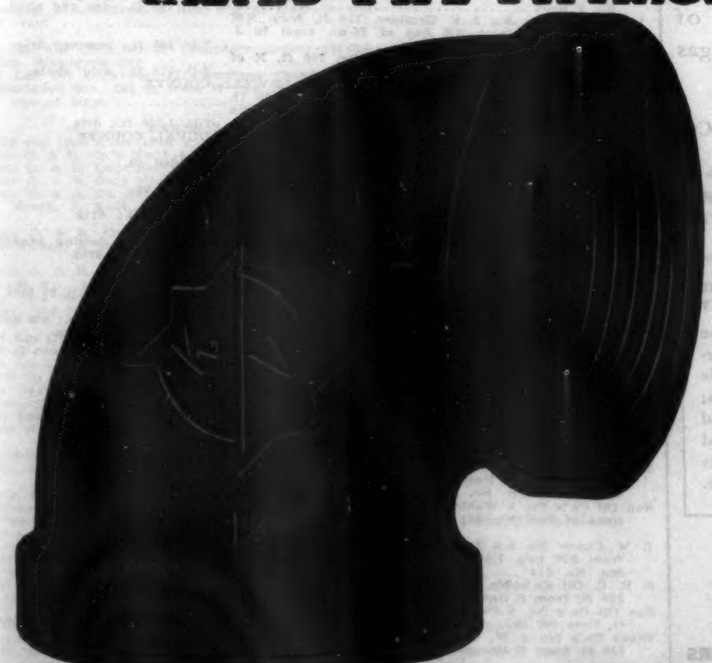

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THE CUSTOM-MADE WELDING WIRE—FOR EXACTING WELDERS

Grey Oil Corp.'s No. 1 A. S. Billings, 2,310 ft. from N line, 330 ft. from W line of Blk. 1, C.C.S.D.&R.G.N.G. Sur. No. 13 ..... T.D. 2,140 ft.; drlg.

Will Ohlhausen's No. 1 Moses Jones, 372 varas from E line, 516 varas from S line of 100-ac. tract in Sur. No. 1,540 ..... T.D. 850 ft.; standing.

WILLIAMSON COUNTY

Alexander Drlg. Co.'s No. 1 J. & G. Kreig ..... T.D. 1,550 ft.; fishing.

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tract, B. Manlove Sur. ..... T.D. 2,195 ft.; standing.

Wilson, Worley & Moore's No. 1 Mrs. M. E. Olive ..... T.D. 41 ft.; S.D.

ZAPATA COUNTY

J. C. Charver's No. 1 Bustamente, 330 ft. from N and E lines of 24-ac. tract in Share 24 of Las Comitas grant ..... T.D. 1,242 ft.; drlg

Hamilton, Brower & Crow's No. 1 Slator, 2,111 ft. from SW line, 1,930 ft. from SE line of Blk. 1, Subd. of Slator ranch in J. V. Borrego grant ..... T.D. 1,969 ft; standing.

Circle W. Oil Co.'s No. 1 M. Garza est., 623 ft. from NW line and 630 ft. from SW line of Blk. 30, C. A. Douglas Subd. of Charco c's la India grant ..... T.D. 637 ft.; drlg.

J. P. Doyle's No. 1 I. Ramirez, 150 ft. from NW and SW lines of Blk. 15, Share 1, Porcion 18 ..... Spudded in and S.D.

Sarah Poppas' No. 1 Juan V. Cueller, Jr., 150 ft. from NE and SE lines of Blk. 3, Sur. 2 of Poppas Subd. of Por. 34 ..... T.D. 812 ft.; drlg.

A. C. Savey et al's No. 1 Flores, 150 ft. from NW line, 206 ft. from NE line of Blk. 8, Share 1 of P. A. Richer Subd. of Porcion No. 36 ..... T.D. 2,404 ft; standing.

Stevens & Brown's No. 1 Alexandro Garcia, 660 ft. from SW line, 660 ft. from NW line of Blk. 6, Stevens & Brown Subd. of W 700 acres, Charco Redondo grant, A. Garcia tr. 16 miles SE of Zapata ..... T.D. 1,350 ft; standing.

Arthur H. Wray's No. 1 Gopher Trust Est., 300 ft. from NW line, 1,020 ft. from SW line, Blk. 14, Sur. 1, Fullerton Subd., Share 8, in J. V. Borrego Grant Sur. ..... T.D. 1,263 ft.; drlg.

ZAVALA COUNTY

Zavala O. & G. Co.'s No. 1 Gates, 1,320 ft. from N line, 1,320 ft. from E line of Hooper & Wade Sur. No. 13 .. T.D. 6,054 ft; hole cleared; standing.

Southwest Texas Proven Areas

Week Ending September 9

CEDAR CREEK POOL—BASTROP COUNTY

Company, well, farm name, section and block—	Remarks
Marts & Beavens' No. 4 Reyes, 300 ft. SE of No. 3 and 325 varas from NW line, 1,330 varas from SW line of 233-ac. tract in Addison Lytton Sur.	T.D. 150 ft.; drlg. shale.
Joe Mills' No. 1 Noss, 400 ft. to E line, 150 ft. S of 78-ac. tract in Addison Litton Sur.	T.D. 1,778 ft.; setting csg.

NORTH DALE POOL—BASTROP COUNTY

Chiquita Oil Co.'s No. 3 Harris, 600 ft. SW of No. 1 or 60 ft. from Bee Creek and 140 ft. from W line of 46-ac. tract in John Maxmilian Sur.	Moving in rig.
Chiquita Oil Co.'s No. 2 M. I. Harris, 300 ft. NW of No. 1, J. Maxmilian Sur.	T.D. 2,175 ft.; abnd.
Marts & Beavens' No. 3-A Riddle, 200 ft. from NW line, 1,160 ft. from NE line of John Maxmilian Sur.	Moving in derrick.
Ogden & Reed's No. 1 Spradlin, 300 ft. from S line, 300 ft. from E line of 113-ac. tract in Grey Sur.	Rigged up; standing.

RIDDLE POOL—BASTROP COUNTY

Floyd Dodson's (and Muckelroy) No. 1 Duran, 45-ac., 300 ft. from NE line, 1,440 ft. from SE line of 100-ac. tract, Flynt Sur.	T.D. 2,424 ft.; S.D.
Ogden & Reed's No. 1 Talley, 150 ft. from NW line, 1,350 ft. from SW line of John Maxmillian Sur.	T.D. 2,127 ft; treated with 3 drums acid; standing.
Ogden & Reed's No. 1-A C. L. Riddle, 1,225 varas from NE line, 288 varas from NW line of Maxmillian Sur.	T.D. 2,276 ft; pumped 1 bbl. dly; to treat with more acid.

TULETA POOL—BEE COUNTY

Conservative Oil Co.'s No. 1 Coutts, 165 ft. from W line, 150 ft. from N line of SW SW SW Sec. 2, Blk. 7, Ragsley Subd., Miller Chittam ranch, J. M. Uranga grant	T.D. 4,323 ft.; reinstated; to drill deeper.

PETTUS POOL—BEE COUNTY

Mauldin's No. 4 fee, 420 ft. NE of No. 3, ¼ mile S from Pettus townsite	T.D. 3,878 ft.; comp. 75 bbls. daily.

ECKERT POOL—BEXAR COUNTY

Eckert & Son's No. 7 Brehm, 312 ft. W of No. 6 on 93-ac. tract in Buquor Sur. No. 58	T.D. 687 ft.; running tubing.
Gatlin Oil Co.'s No. 16 I. A. Beck, 300 ft. from NW of No. 2 Beck	T.D. 760 ft.; dry and abnd.
I. F. Harrison's No. 1 F. Gembler, 150 ft. from NW line, 460 ft. from NE line of 88-ac. tract in J. Montes Sur.	T.D. 435 ft.; resumed drlg.
Swearingen Oil Co.'s No. 14 Halbardier, 700 ft. N of No. 8 on 93-ac. tract	T.D. 510 ft.; drlg. shale.

WEBSTER POOL—CALDWELL COUNTY

C. J. Webster Oil & Gas Co.'s No. 1 Pulpe, 150 ft. from E line, 225 ft. from S line of tract in John A. Neill Sur.	T.D. 1,726 ft.; drlg.

NORTH GOVERNMENT WELLS POOL—DUVAL COUNTY

Al Buchanan et al's No. 4 Ellison, 330 ft. from N and W lines of (40-ac.) NE of NW of Sur. No. 44	Spudded in.
Central Producers, Inc.'s No. 7 Tuck & Johnson, 330 ft. from S and W lines of SE SW of Sur. No. 43	Rigging up.
A. L. Edington's No. 2 Lundell, 200 ft. from N and E lines of S½ SE Sec. 45	T.D. 600 ft.; drlg.
Hester Bros.' No. 1 fee, 330 ft. from S and E lines of NE of Sur. No. 47	T.D. 200 ft.; fooling around.
Humble Oil & Refining Co.'s No. 12 Hahl	T.D. 1,480 ft.; drlg.
Humble O. & R. Co.'s No. 11 Hahl, 990 ft. from N line, 330 ft. from W line (most southerly of N line and westerly of W line) in Sur. No. 74	T.D. 2,399 ft.; comp. 50 bbls. hrly.
Humble O. & R. Co.'s No. 1 Duval County Ranch Co., 330 ft. from S and W lines of NW cor. Sur. No. 362	T.D. 2,270 ft.; comp.; not gauged; connecting to tanks.
Magnolia Pet. Co.'s No. 2 Hahl-Southland, 265 ft. from N line, 195 ft. from W line of Sur. No. 61	Rigging up.
Navarro Oil Co.'s No. 8 Hahl, 2,960 ft. from S line, 330 ft. from W line of W½ of Sur. No. 360	Rigging up.
Navarro Oil Co.'s No. 17 Hahl, 990 ft. from N line, 330 ft. from E line of Sur. No. 360	Set surface csg.; W.O.C.
Reynosa Oil Co.'s No. 3-A Duval County Ranch Co., 330 ft. from S line, 990 ft. from W line of N½ of SW¼ of Sur. No. 362	T.D. 1,815 ft.; drlg.
Reynosa Oil Co.'s No. 3-B Duval County Ranch Co., 990 ft. from N line, 330 ft. from E line of E½ of SE¼ of Sur. No. 365	Rigging up.
Sun Oil Co.'s No. 5 Welderkehr, 330 ft. from N and E lines of Sur. No. 361	Spudded in.

RAINOSA POOL—DUVAL COUNTY

L. W. Capps' No. 6-A Duval County Ranch Co., 330 ft. from SW line, 1,350 ft. from NW line of W¼ of Sur. No. 374	Rigging up.
S. R. C. Oil Co.'s No. 3 Duval County Ranch Co., 330 ft. from S line, 375 ft. from E line of Sur. 393	T.D. 1,759 ft.; fishing.
Sun Oil Co.'s No. 6 Cuellar, 730 ft. from SW line, 330 ft. from SE line of E¼ of Sur. No. 376	T.D. 2,420 ft.; 75 bbls. daily.
Texas Co.'s No. 5 W. C. Riggs, 1,667 ft. from S line, 330 ft. from E line of E½ of NW¼ of Sur. No. 48	T.D. 1,085 ft.; drlg.

PALANGANO POOL—DUVAL COUNTY

Southern Alkali Co.'s No. 2 Jane Schallert, 1,000 ft. from S line, 2,650 ft. from E line of Sur. No. 81	T.D. 1,000 ft.; standing.

NORTH PETTUS POOL—KARNES COUNTY

Begel Oil Co.'s (Gulf Coast Oil Co.) No. 6 McKinney....T.D. 3,663 ft.; comp. 125 bbls. dly.; working pressure 150 lbs.

Magnolia Pet. Co.'s No. 3 Porter-State, 689 ft. E of No. 1 Porter, 24 ft. from W line, 1,650 ft. from S line in M. A. Porter Sur. ..... T.D. 3,693 ft.; comp.; not gauged.

CHITTIM POOL—MAVERICK COUNTY

Rycade Oil Corp. et al's No. 1 Chittim, 315 ft. from S line, 1,165 ft. from E line of Sec. 157, L&G.N.R.R. Sur., Blk. 7 ..... T.D. 44 ft.; dry and abandoned.

Rycade Oil Corp. et al's No. 2 Chittim, 1,520 ft. from N line, 250 ft. from W line of Sec. 157, L&G.N.R.R. Sur., Blk. 7 ..... Moving in spudder.

JACOB POOL—McMULLEN COUNTY

Loma Oil Co.'s No. 16-A Jacob, 2,360 ft. from W line, 1,410 ft. from S line G.H.&H.R.R. Sur. ..... T.D. 520 ft.; drlg.

Loma Oil Co.'s No. 15-A Jacob, 660 ft. N of No. 14 Jacob ..... T.D. 950 ft.; set csg.; drill in Saturday.

Longhorn Oil Co.'s No. 3-A Lark, 450 ft. from N line, 150 ft. from W line of Blk. 14, of Subd. of Lark land in E. W. B. Scrugham Sur. ..... T.D. 991 ft.; coring for Pettus sand.

Kennon & Stephenson's No. 1 Lark, 150 ft. from N and W lines of Blk. 15, subd. of Lark land in E. W. B. Scrugham Sur. ..... T.D. 1,033 ft.; set csg.; W.O.C.

CUEVITAS POOL—STARR COUNTY

Sun Oil Co.'s No. 3-A Guerra, 5,940 ft. from NW line, 1,000 ft. from SW line of Share 14-B in Las Cuevitas grant ..... T.D. 2,100 ft.; drlg.

Sun Oil Co.'s No. 2-A Guerra, 1,950 ft. from N and W lines of Las Cuevitas Sur. ..... T.D. 2,244 ft.; comp. 40 bbls. in 11 hrs. on various size chokes.

LOS OLMOS POOL—STARR COUNTY

Tarver & Nance's No. 3 Kelsey Bass, 150 ft. from N and W lines of SW SE Sec. 7, Pors. 75, 76, 77, jurisdiction Camargo ..... T.D. 250 ft.; drlg.

MOCA POOL—WEBB COUNTY

Moca Oil Co.'s No. 7 Duval County Ranch Co., 285 ft. from W line, 1,825 ft. from N line of Blk. 32, Share 3 of Zapata County School Land Sur. ..... Moving in rig.

R. D. Semmes' No. 3 Duval County Ranch Co., 150 ft. from N line, 1,840 ft. from E line of Blk. 32, Share 3, Zapata County School Land Sur. ..... T.D. 882 ft.; set csg.; W.O.C.

ESCOBAS POOL—ZAPATA COUNTY

Texas Co.'s No. 33 Whitehead, 2,265 ft. from SE line, 19,518 ft. from SW line of Cerrito Blanco grant.... Spudded in.

S. R. & C. Oil Corp.'s No. 2-C Trevino, 330 ft. from S line, 330 ft. from W line of N½ of Blk. 13, in Sur. No. 412 ..... Location.

JENNINGS POOL—ZAPATA COUNTY

United Prod. Corp.'s No. 11 Measles, 3,483 ft. from NW line, 16,500 ft. from SW line of Cerrito Blanco grant ..... T.D. 1,503 ft.; testing sand at 1,506-08 ft.

Gulf Coast Fields and Wildcats

(Continued from Page 53)

BARBERS HILL—CHAMBERS COUNTY

McAlbert Oil Co.'s No. 2 Higgins ..... Made 140 bbls. 5,021 ft.; testing.

Mills Bennett Prod. Co.'s No. 4-A Barber (W.O.), Henry Griffith League ..... Comp. 1,600 bbls.; ½-in. choke; P.B. 5,249 ft.

Mills Bennett Prod. Co.'s No. 1-C Barber, Henry Griffith League, 100 ft. E. 30 ft. N of SW cor. of tract.. Drlg. sand 4,731 ft.

Mills Bennett Prod. Co.'s No. 2-B Gulf fee, Wm. Bloodgood Sur., 1,240 ft. N along N line, 300 ft. E at right angles to W line ..... Drlg. sand 788 ft.

Mills Bennett Prod. Co.'s No. 6-A Wilburn, H. Griffith Sur. (O.W.D.D.) ..... Rigging; T.D. 5,127 ft.

Sinclair Prairie Oil Co.'s No. 8 Wilburn (W.O.), Henry Griffith League ..... T.D. 5,271 ft.; sidetracked at 3,-975 ft. and drlg. new hole 4,-905 ft.

Sinclair Prairie Oil Co.'s No. 15 Wilburn, Henry Griffith League, 150 ft. W of No. 14 ..... Derrick.

Sun Oil Co.'s No. 11 J. Wilburn (W.O.), Wm. Hodges Sur. ..... Drlg. shale and sand showing oil 5,180 ft.

Sun Oil Co.'s No. 12 Wilburn (W.O.), Wm. Hodges Sur... T.D. 5,138 ft.; pumped 22 bbls. in 17 hrs.

Sun Oil Co.'s No. 17 Wilburn, Henry Griffith League, 150 ft. W of No. 6 and 50 ft. S of N line ..... Derrick.

Texas Co.'s No. 7 Wilburn (W.O.), Henry Griffith League Drlg. shale 4,953 ft.

Texas Gulf Prod. Co.'s No. 3 C. Kirby (W.O.) ..... T.D. 5,229 ft.; sidetracking 4,-401 ft.

Texas Gulf Prod. Co.'s No. 11-B Kirby, Henry Griffith League, 411 ft. from S line, 473 ft. from W line of tract ..... Comp. 600 bbls.; ⅝-in. choke; T.D. 4,406 ft.

Yount Lee Oil Co.'s No. 21 Chambers County (W.O.), Wm. Bloodgood Sur. ..... Drlg. salt 3,122 ft.

Yount Lee Oil Co.'s No. 22 Chambers County, Wm. Bloodgood Sur., 200 ft. from W line, 3833½ ft. from N line of lease ..... Drlg. hard sand and lime rock 3,879 ft.

RABBS RIDGE—FORT BEND COUNTY

Humble and Gulf's No. 19-A F. I. Booth ..... Drlg. shale 3,494 ft.

Humble O. & R. Co.'s No. 8-A A. P. George ..... Drlg. shale 2,229 ft.

Humble O. & R. Co.'s No. 11-A Lockwood & Sharp .... Derrick.

Humble O. & R. Co.'s No. 24-A Lockwood & Sharp .... Spudding.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 13-A F. I. Booth, J. Rabb Sur. ..... Comp. 60 bbls. in 1 hr.; T.D. 5,-300 ft.; ⅝-in. choke.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 14-A Lockwood, J. Rabb Sur., 150 ft. due E of No. 14... Comp. 62 bbls. an hr.; T.D. 5,-300 ft.; ⅝-in. choke.

Humble O. & R. Co.'s No. 23 Lockwood & Sharp, J. Rabb Sur., 1,923 ft. E line, 379 ft. N line of tract.. Cmtd. csg. 5,341 ft.

Texas Co.'s No. 1 Sherman McCall, Samuel Kennedy Sur., 300 ft. N, 133 ft. W of SE cor. lease ..... Drlg. shale 5,235 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 1-B Broussard & Orme, 136 ft. E of center of W line of M. Dunman Sur. ..... Drlg. sticky shale 5,787 ft.

Yount Lee Oil Co.'s No. 37 Cade, N. Fitzsimmons Sur., 600 ft. S of No. 36 ..... Spudded.

Yount Lee Oil Co.'s No. 1-B Cade, N. Fitzsimmons Sur., 488 ft. from S line, 320 ft. from E line ..... Drlg. shale and sand 5,497 ft.

Yount Lee Oil Co.'s No. 17 Smith, M. Dunman Sur., 300 ft. SW of No. 14 ..... T.D. 6,353 ft.; sidetrack 6,001 ft.

ARIOLA—HARDIN COUNTY

Republic-Houston Oil Co.'s No. 4 Ariola, 300 ft. NE of No. 1, Ariola Sur. ..... Drlg. sand 4,255 ft.

TOMBALL—HARRIS COUNTY

Humble O. & R. Co. and Magnolia Pet. Co.'s No. 1 Bloecher, J. N. Hooper Sur. (Abst. A-375), 1,050 ft. from S line, 650 ft. from W line ..... Pulling liner; T.D. 5,580 ft.

Humble Oil & R. Co.'s No. 1 Fredericks, center 18-ac. tract, J. M. Hooper Sur. ..... Derrick.

Humble O. & R. Co. and Magnolia Pet. Co.'s No. 1 Gebhart, Wm. Perkins Sur., 1,399 ft. from N line of survey, and 1,400 ft. from W line of tract ..... Drlg. shale 5,992 ft.

Humble O. & R. Co.'s No. 1 Hendricks, 505 ft. from E line, 466 ft. from N line of 95.7-ac. tract, Wm. Hurd Sur., (Abst. 376) ..... Drlg. shale 5,305 ft.

Texas Co.'s No. 1 H. Martens, C. Goodrich Sur., 666 ft. W, 300 ft. N of SE cor. of lease ..... Drlg. lime rock 1,994 ft.

Texas Co.'s No. 3 E. Mueller, J. M. Hooper Sur., 558 ft. N and 389 ft. W. SE cor. of lease ..... Drlg. shale 4,581 ft.

Medium Outlet Pressure Controlled with MINIMUM FRICTION

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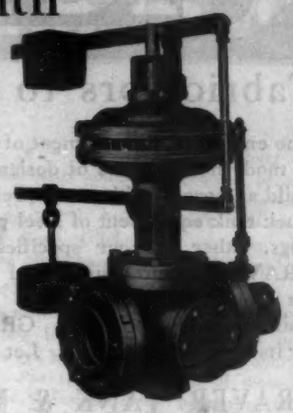

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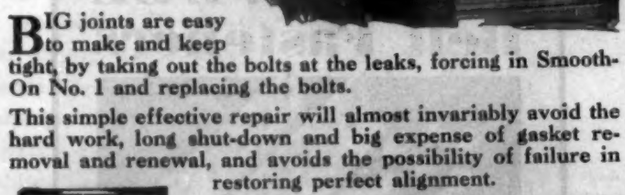

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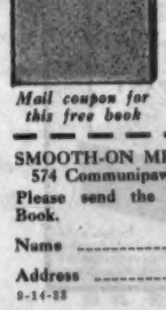

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SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 102 Jordit, Jordit Sur. ..... Rig.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 7 Davis (W.O.), Duncan Sur. .. Sand 6,850-70 ft.; blew out; pumping cement.

Cranfill-Reynolds Co.'s No. 4 Esperson (W.O.) ..... Temp. S.D. 5,286 ft.

Cranfill-Reynolds Co.'s No. 11 Moores Bluff, Duncan Sur., 2,100 ft. from N line, 1,069 ft. from E line of 632-ac. tract ..... Drlg. shale 4,381 ft.

HULL—LIBERTY COUNTY

W. B. Flynn's No. 2 Flynn, J. Devore Sur., 25 ft. S No. 1. Drlg. sand 817 ft.

Houston Prod. Co.'s No. 1 Orgain, J. Devore Sur., 207 ft. W of E line, 50 ft. S of N line, 22.26-ac. lease .. Drlg. shale 4,900 ft.

Humble O. & R. Co.'s No. 1 Hannah, 204 ft. N, 312 ft. W, SE cor. of lease ..... Rigging.

Miramar Oil Corp.'s No. 2 Phoenix Dev. Co. (25 ac.), Jesse DeVore Sur., 230 ft. S line, 350 ft. W line ... Comp. 900 bbls.; 11/32-in. choke; T.D. 4,500 ft.

The Texas Co.'s No. 8 Hannah (W.O.), Jesse DeVore Sur. ..... T.D. 5,133 ft.; sidetracking; drlg. new hole 5,370 ft.

CONROE—MONTGOMERY COUNTY

Alpha Oil Co.'s No. 1 Allen, Lemuel Smith Sur., 275 ft. E line, 467 ft. N line ..... Sand 5,133 ft.; cmtd. csg.

Alpha Oil Co.'s No. 10 Keystone Mills, L. Smith Sur., 755 ft. NE of No. 5 ..... Derrick.

Alpha Oil Co.'s No. 3 South Texas ..... Derrick.

E. S. Craft et al's No. 1 Granger, T.&N.O. Sur., 467 ft. NW cor. 77-ac. tract (O.W.D.D.) ..... Drlg. 5,113 ft.

H. M. Crighton's No. 2-B South Tex. Dev. Co., T.&N. O. Sur. No. 5, center 18.50 acres ..... Comp. 241 bbls.; 24 hrs.; ¼-in. choke; T.D. 5,118 ft.

Feltex Oil Co.'s No. 4 Kirby-Bertrand, G. W. Wagers Sur., 340 ft. W line, 1,389 ft. S line ..... T.D. 5,130 ft.; 220 bbls.; 12 hrs.; ½-in. choke.

Gulf Coast Drlg. & Prod. Co.'s No. 12-A Keystone Mills, A. James Sur., 467 ft. from W line, 933 ft. S of No. 11 ..... Cmtd. 1,347 ft.

Gulf Oil & Sulphur Co.'s No. 2 Springfield, J. S. Springfield Sur., 466 ft. from SW line, 100-ac. lease ..... Derrick.

Harrison & Abercrombie's No. 7 Massey, J. Massey Sur., 852 ft. S of No. 8 ..... Drlg. shale 4,583 ft.

Houston Oil Co.-Tide Water Oil Co.'s No. 8 Hamman, C. B. Stewart Sur., 1,214 ft. from W line, 1,690 ft. from S line ..... Cmtd. 974 ft.

Houston Oil Co.-Tide Water Oil Co.'s No. 5 Moore, Lemuel Smith Sur., 466 ft. SW cor. ..... Drlg. shale 4,590 ft.

Humble O. & R. Co.'s No. 8 Emory, W.C. Ry. Sur.,

Humble O. & R. Co.'s No. 9 Dobbins, Ransom House Sur., 425 ft. N line of tract, 3,610 ft. W line ..... T.D. 5,119 ft.; comp. 80 bbls. an hr.; ½-in. choke.

Humble O. & R. Co.'s No. 22 Madeley, Ransom House Sur., 933 ft. NE of No. 10 ..... Shale 5,117 ft.; cmtd. csg.

Humble O. & R. Co.'s No. 23 Madeley, Ransom House Sur., 933 ft. SW of No. 3 ..... Shale 5,137 ft.; cmtd. csg.

Humble O. & R. Co.'s No. 24 Madeley, Ransom House Sur., 933 ft. SE of No. 5 ..... Drlg. shale 1,300 ft.

Humble O. & R. Co.'s No. 2 L. B. McComb, Lemuel Smith Sur., 625 ft. N line, 500 ft. E line ..... Drlg. shale 5,100 ft.

Humble O. & R. Co.'s No. 7 L. B. McComb, L. Smith Sur., 525 ft. SW, 550 ft. NW of E cor. of lease .... Drlg. shale 5,085 ft.

Humble O. & R. Co.'s No. 18 Moore, L. Smith Sur., 933 ft. NW of No. 8 ..... T.D. 5,125 ft.; comp. 95 bbls. an hr.; ½-in. choke.

Humble O. & R. Co.'s No. 28 Moore, Lemuel Smith Sur., 933 ft. SW of No. 28 ..... T.D. 5,126 ft.; comp. 85 bbls. an hr.; ½-in. choke.

Humble O. & R. Co.'s No. 33 Moore, L. Smith Sur. .... Shale 5,137 ft.; cmtd. csg.

Humble O. & R. Co.'s No. 37 Moore, L. Smith Sur., 735 ft. NE of No. 21 ..... Drlg. 1,515 ft.

Humble O. & R. Co.'s No. 38 Moore, L. Smith Sur. ... Drlg. shale 4,403 ft.

Humble O. & R. Co.'s No. 42 Moore, L. Smith Sur., 550 ft. SE right angles out of most easterly NE cor. of lease ..... Drlg. shale 5,100 ft.

Humble O. & R. Co.'s No. 41 South Tex. Dev. Co., Theodore Slade Sur., 933 ft. SW of No. 4 ..... Drlg. shale 4,317 ft.

Humble O. & R. Co.'s No. 47 South Tex. Dev. Co., Theo. Slade Sur., 933 ft. NE of No. 9, and 933 ft. NW of No. 2 ..... Drlg. shale 4,135 ft.

Humble O. & R. Co.'s No. 2-E South Tex. Dev. Co., C. A. West Sur. ..... T.D. 5,156 ft.; comp. 77 bbls. per hr.; ½-in. choke

Humble O. & R. Co.'s No. 1-D South Tex. Dev. Co., 344 ft. E of center of W line of T.&N.O. Sur. No. 15 .. T.D. 5,153 ft.; P.B. to 5,060 ft. to test.

Humble O. & R. Co.'s No. 1-E South Tex. Dev. Co., C. A. West Sur., center of 20-ac. lease ..... Sand 5,145 ft.; comp. 51 bbls. an hr.; ½-in. choke.

Malta Oil Co.'s No. 2 Tex-Osage, G. Harris Sur., 378 ft. S line, 466 ft. N line of lease ..... Drlg. shale 5,147 ft.

Mortex Oil Corp.'s No. 1 J. C. Young, Wilson Strickland Sur., 231 ft. from E line, 131 ft. from S line of 2½ acres ..... Drlg. shale 4,972 ft.

Showers & Moncrief's No. 2-A Dunn, 466 ft. N line, 430 ft. E line, Wilson Strickland Sur. ..... Drlg. shale 1,192 ft.

R. D. Simonton, rec., J. W. Watson Sur., center S 20 acres of Coffield 40 acres ..... Drlg. 5,012 ft.

Southern Liberty Oil Co.'s No. 4-B South Tex. Dev. Co. ..... T.D. 5,136 ft.; comp. 79 bbls. an hr.; ½-in. choke.

Southland Oil Co.'s No. 8 Cummings, Wilson Strickland Sur., 766 ft. E line, 294 ft. S line of lease .... Drlg. shale 5,104 ft.

Strake Pet. Corp.'s No. 2 Etheridge, S. H. Bryan Sur., 467 ft. E line, 3,350 ft. S line lease ..... Derrick.

Strake Pet. Corp.'s No. 2 Keystone Mills ..... Drlg. shale 5,090 ft.

Sun Oil Co.'s No. 3 Foster, J. Bricker Sur. ..... Comp. 2,099 bbls.; T.D. 5,130 ft.; ½-in. choke.

Sun Oil Co.'s No. 11 Foster, J. Bricker Sur. ..... Abd. 6,364 ft.

Sun Oil Co.'s No. 12 Foster, J. Bricker Sur. ..... Comp. 2,304 bbls.; ½-in. choke, 5,127 ft.

Sun Oil Co.'s No. 15 Foster, J. Bricker Sur. ..... Coring 5,128 ft.

Sun Oil Co.'s No. 16 Foster, 467 ft. S and E lines, J. Bricker Sur. ..... Drlg. 5,125 ft.

Sun Oil Co.'s No. 18 Foster, J. Bricker Sur. ..... Drlg. 5,096 ft.

Sun Oil Co.'s No. 22 Foster, J. Bricker Sur., 1,358 ft. S, 1,613 ft. E of lease and survey line ..... Derrick.

Tide Water Oil Co.'s No. 12 Dean, W. C. C. Lynch Sur., 330 ft. out of NW cor. ..... T.D. 6,020 ft.; drlg. new hole 5,003 ft.

Tide Water Oil Co.'s No. 3 Eichlitz, L. Smith Sur., 467 ft. N line, 310 ft. E line ..... Drlg. shale 4,077 ft.

Tide Water Oil Co.'s No. 9 Krohn, H. Bryan Sur., 467 ft. W line, 1,266 ft. N line and 797 ft. S line ..... Drlg. shale 3,540 ft.

Tide Water Oil Co.'s No. 25-A Lewis, C. B. Stewart Sur., 1,400 ft. W line, 1,233 ft. N line ..... Comp. 32 bbls. per hr.; ½-in. choke; 5,130 ft.

Tide Water Oil Co.'s No. 26-A Lewis, C. B. Stewart Sur., 1,175 ft. W line, 3,101 ft. N line ..... Gumbo and lime 4,900 ft.

West Prod. Co.'s No. 1 Foster Lbr. Co., 467 ft. N line, 650 ft. W line, Sec. 3, T.&N.O. Sur. ..... Drlg. shale 3,037 ft.

LIVINGSTON—POLK COUNTY

Gist Oil Co.'s No. 1 Kavanaugh Collins, A. Viesca Sur., 150 ft. NE, 150 ft. NW, SE cor. G. P. Reid's 740-ac. tract ..... Drlg. shale 4,240 ft.

Shell Pet. Corp.'s No. 2 Davis & Holmes, A. Viesca Sur., 485 ft. N, 376 ft. W of NE cor. of Jim Duff 35-ac. tract ..... T.D. 4,438 ft.; reworking.

Skelly Oil Co.'s No. 1 Sanders, 755 ft. N of E line, 305 ft. S of N line, Sanders' 40 acres, A. Viesca Sur. ..... Drlg. shale 1,667 ft.

Sunby Oil Co.'s No. 1 Grandburry & Smith, W. Shadburn Sur., 500 ft. SW of NE cor. Williams Sur., 150 ft. NW ..... Abd. 427 ft.

FANNETT—JEFFERSON COUNTY

Black Gold Oil Co.'s No. 1 Jackson, Wm. Smith Sur., 3,766 ft. S line, 117 ft. from W line (356) ..... Rigging up.
Gulf Prod. Co.'s No. 7 Burrell, W. H. Smith Sur., 150 ft. W of No. 6 ..... Drlg. sand and shale 2,871 ft.
Gulf Prod. Co.'s No. 13 Thomas, W. H. Smith Sur. .... T.D. 4,190 ft.; pulling screen to deepen.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 2 Crowe & Jacobs, 1,700 ft. E, 1,950 ft. N of SW cor. of H.&T.C. Sur. No. 21 ..... Sandy shale 5,281 ft.; S.O.

HOCKLEY—HARRIS COUNTY

John Deering's No. 4 Warren, T. A. Scully Sur., 250 ft. SW of Texas Co.'s No. 2 Warren ..... Drlg. 1,450 ft.

HUMBLE—HARRIS COUNTY

Texas Co.'s No. 24 Koehler (O.W.D.D.) ..... Rigging; T.D. 2,896 ft.

MYKAWA—HARRIS COUNTY

Crown-Framer Oil Co.'s No. 4 Minnetex, Wm. Lovett Sur., 165 ft. S, 120 ft. W of NE cor. Blk. 193 ..... T.D. 6,530 ft.; P.B. to 5,250 ft.; sidetracked and D.D.

PIERCE JUNCTION—HARRIS COUNTY

Rio Bravo Oil Co.'s No. 19-A Settegast (D.D.), J. Kopman Sur. No. 44, 2,585 ft. S, 285 ft. W of NE cor. of "A" lease ..... Rig up to deepen 4,181 ft.

PORT NECHES—ORANGE COUNTY

Texas Co.'s No. 1-B Polk, Jacob Beaumont Sur., 150 ft. NE cor. ..... Derrick.
The Texas Co.'s No. 1 Orange Nat. Bank, 150 ft. out of NW cor of lease, Jacob Beaumont Sur. ..... T.D. 4,799 ft.; swabbed 35 bbls. in 15 hrs.; showing wtr.

GRETA—REFUGIO COUNTY

Atlantic Oil Prod. Co.'s No. 1 O'Brien, E. H. Winfield Sur., Blk. 5, 466 ft. from S line in center of block E and W ..... Coring sand 4,401 ft.
Atlantic-Alamo's No. 1 J. J. O'Brien, E. H. Winfield Sur., 466 ft. out of NW cor. 167-ac. lease ..... Drlg. sandy lime 4,323 ft.
Atlantic-Alamo's No. 1 J. M. O'Brien, E. H. Winfield Sur., 466 ft. out of SE cor. 212-ac. tract ..... Drlg. sandy lime 4,131 ft.
Atlantic Oil Prod. Co. and Heyser & Heard's No. 2 O'Brien ..... Derrick.
Blanco Oil Co.'s No. 2-B J. M. O'Brien, E. H. Winfield Sur., 466 ft. out of SE cor. 50 acres ..... Drlg. lime 3,759 ft.
Blanco Oil Co.'s No. 2-A J. J. O'Brien, N. C. Crunk Sur., 600 ft. SW of No. 1-A ..... Comp. 4,379-99 ft.; 575 bbls.; ¼-in. choke.
Circle W Oil Co.'s No. 1 O'Brien, E. H. Winfield Sur., 462 ft. from S line of survey, 466 ft. from E line of 112-ac. tract ..... Comp. 700 bbls.; ¼-in. choke; 4,396 ft.
Circle W Oil Co.'s No. 2 O'Brien, E. H. Winfield Sur., 1,989 ft. from N line, 466 ft. from E line of 212-ac. tract ..... Running tubing 4,400 ft.
Dash Prod. Co.'s No. 2 O'Brien, N. S. Crunk Sur., 466 ft. S of N line of center E and W ..... Drlg. cap rock 4,352 ft.
Dash Prod. Co.'s No. 3 O'Brien, N. S. Crunk Sur., 645 ft. of W line, 301 ft. at right angles R.R. ..... Fishing 1,948 ft.
Floboots Oil Corp.'s No. 1 J. F. B. Heard, 466 ft. E of W line, 522 ft. N of S line, 150-ac. tract, M. J. Ximines Sur. ..... Drlg. 1,470 ft.
Greta Oil Corp.'s No. 3 O'Brien, E. H. Winfield Sur., 150 ft. out of SW cor. of tract ..... Drlg. shale 4,363 ft.
Greta Oil Co.'s No. 2 B. O'Brien, 933 ft. E of No. 1 B... Derrick.
Greta Oil Corp.'s No. 4-B O'Brien, 466 ft. NW of E line, 1,516 ft. E of W line, E. H. Winfield Sur. .... Rigging.
Heyser & Heard's No. 2 O'Brien, E. H. Winfield Sur., 466 ft. NW cor, 50-ac. tract, Blk. 6 ..... Drlg. shale 3,836 ft.
Edwin M. Jones' No. 1 A. O'Brien ..... Drlg. 2,750 ft.
Edwin M. Jones' No. 2 O'Brien, E. H. Winfield Sur., Blk. 4, 466 ft. from N line in center E and W ..... Derrick.
Edwin M. Jones' No. 2-B O'Brien ..... Drlg. 3,205 ft.
Edwin M. Jones' No. 3-G O'Brien ..... Derrick.
Floboots Oil Corp.'s No. 2 O'Brien ..... Rigging.
Nesral Oil Co.'s No. 1-A Wilson Heard, M. J. Ximines Sur., 330 ft. out of NE cor. lease ..... Drlg. shale 5,210 ft.
Nesral Oil Co.'s No. 1 O'Connor ..... T.D. 4,353 ft.; 300 bbls.; ½-in. choke.
Nesral Oil Co.'s (Pearson) No. 1 Thomas O'Connor, 330 ft. SE of railroad ..... Derrick.
Rutherford and Atlantic Oil Prod. Co.'s No. 1 O'Brien, Crunk Sur. ..... Drlg. shale 3,395 ft.
Southwest Pet. Corp.'s No. 2-A O'Brien, E. H. Winfield Sur., 466 ft. NW cor. 25-ac. tract ..... Derrick.
Southwest Pet. Corp.'s No. 2-B O'Brien, E. H. Winfield Sur., 466 ft. from R.R. right of way, 933 ft. SW of No. 1-B ..... Drlg. hard rock 4,384 ft.
Southwest Oil Corp.'s No. 1 C. O'Brien, N. S. Crunk Sur., 420 ft. W of E line, 345 ft. S of N line of 22.7 acres ..... Drlg. shale 4,355 ft.
Texas Gulf Prod. Co.'s No. 1 J. M. O'Brien, J. A. Peoples Sur., 466 ft. SW cor., Blk. 3 ..... Rigging.
Texas Gulf Prod. Co.'s No. 2 J. M. O'Brien, J. A. Peoples Sur., 466 ft. NW cor., Blk. 3 ..... Moving in material.
Texas Gulf Prod. Co.'s No. 1 J. M. O'Brien, J. H. Winfield Sur., 466 ft. NS line, center E and W, Blk. 12 ..... Moving in material.
United Prod. Co.'s No. 6 Fox est., Wm. Hews and L. Brown Sur., 2,956 ft. N line, 787 ft. E line ..... Drlg. sand and lime 1,540 ft.

SOUTH LOUISIANA FIELDS

ASSUMPTION PARISH

Barnsdall Oil Co.'s No. 1 Williams, 330 ft. out of NE cor. Sec. 38-14s-14e ..... Drlg. shale 7,465 ft.

VINTON—CALCASIEU PARISH

Gulf Ref. Co.'s No. 7 J. W. Gardner, 305 ft. E, 550 ft. N, SW cor. SE NE Sec. 33-10s-12w ..... Rigging.
Wilson Broad's No. 10 Wilson Strip, 650 ft. N, 379 ft. E, SW cor. SE NE Sec. 23-10S-12w ..... Drlg. in sand 2,596 ft.

CAMERON MEADOWS—CAMERON PARISH

Burton-Sutton Oil Co.'s No. 1 School Land, 500 ft. W, 20 ft. N, SE cor. Sec. 16-14s-13w ..... Drlg. lime and shale 5,960 ft.

CALCASIEU PARISH

Fred Oil Co.'s No. 1 Farrar, 566 ft. N, 300 ft. W, SE cor. NW SE Sec. 36-8s-10w ..... Derrick.
Union Sulphur Co.'s No. 1 Stout, 1,337 ft. N, 1,167 ft. W of SE cor. Sec. 36-8s-8w ..... Drlg. 7,406 ft.

CHOCTAW—IBERVILLE PARISH

Standard Oil Co. of La.'s No. 3 Myrtle Grove, 2,100 ft. N, 200 ft. W, SE cor. SW Sec. 52-9s-11e ..... T.D. 2,434 ft.; pumping 120 bbls.
Standard Oil Co. of La.'s No. 5 Myrtle Grove, 1,700 ft. N, 200 ft. W, SE SW cor. SW Sec. 52-9s-11e ..... Capping piling.

EVANGELINE PARISH

J. E. Leadau's No. 2 Vidrine, 280 ft. W, 400 ft. S, NE cor. Sec. 47-3s-3e ..... O.W.D.D.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 5 Alliance Trust Co., 535 ft. from N line, 530 ft. from W line of Sec. 34-11s-1w ..... Drlg. sand 4,537 ft.
Pure Oil Co.'s No. 1 Grady Lee-Humble, 2,031 ft. E, 225 ft. N of NW cor. Sec. 34, in Sec. 27-11s-1w... Rigging.
Pure Oil Co.'s No. 4 Mulvey, 1,721 ft. from N line, 2,515 ft. from W line of Sec. 24-11s-1w ..... Drlg. sandy shale 4,027 ft.

LAFOURCHE PARISH

Gulf Ref. Co.'s No. 1 B. Community, 1,635 ft. E, 365 ft. NW Sec. 26-21s-22e ..... Rigging.
Barnsdall Oil Co.'s No. 1 Harang, Lot 6, in Twp. 17s-20e. Drlg. sandy shale 2,900 ft.

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 9 Lake Barre-L.L.&E., 4,013 ft. S, 305 ft. E of NW cor. Sec. 30-21s-20e in Sec. 36-21s-19e ..... Drlg. shale 2,440 ft.
Texas Co.'s No. 32 State-Lake Barre, 150 ft. northerly from No. 18 ..... Drlg. salt 3,566 ft.

LOCKPORT—CALCASIEU PARISH

Magnolia's No. 9 Farquahar, 200 ft. N, 150 ft. E of SW cor. NE SE Sec. 8-19s-3w (O.W.D.D.) ..... T.D. 4,859 ft.; pulling screen.

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HACKBERRY—CAMERON PARISH

Gulf Ref. Co.'s No. 12 Irwin, 885 ft. N, 513 ft. E of SW cor. Sec. 44-12s-9w ..... Drlg. hard shale 6,352 ft.
Texas Co.'s No. 10-B State, 1,000 ft. E, 300 ft. N of NE cor. Sec. 13-12s-10w ..... Preparing to set screen; T.D. 7,274 ft.
Union Sulphur Co.'s No. 7 Gulf Land-Humble lease, 1,010 ft. N, 661 ft. E of SW cor. Sec. 12-12s-10w ... Drlg. rock 5,770 ft.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Barnsdall Oil Co.'s No. 1 Heyd, 330 ft. SW cor. of E½ SW Sec. 7-9s-6w ..... Derrick.
Magnolia Pet. Co.'s No. 4 Waits, Sec. 12-9s-7w, 330 ft. from E line, 660 ft. S of No. 3 ..... Drlg. sticky shale 6,492 ft.
Magnolia Pet. Co.'s No. 2 Willett, 990 ft. N, 330 ft. E of SW cor. NW Sec. 7-9s-6w ..... Drlg. sandy lime 7,003 ft.
Shell Pet. Corp.'s No. 4 Heyd, 2,123 ft. W, 1,316 ft. S of NE cor. Sec. 12-9s-7w ..... T.D. 4,929 ft.; standing cratered.
Shell Pet. Corp.'s No. 5 Heyd, 335 ft. S of NW cor. of Sec. 18-9s-7w, and 225 ft. W of E line of Sec. 13. Drlg. shale 3,100 ft.
Shell Pet. Corp.'s No. 6 Heyd, 660 ft. S line, 660 ft. W line of lease, Sec. 18-9s-7w ..... Drlg. shale 1,301 ft.
Shell Pet. Corp.'s No. 2 Stafford, 330 ft. from W line and 265 ft. from S line of NW Sec. 18-9s-6w ..... Drlg. sticky shale 6,357 ft.
Shell Pet. Corp.'s No. 1 Tuten, 265 ft. S, 330 ft. W of NE cor. SW Sec. 13-9s-7w ..... Temp. S.D. 1,337 ft.

JEFFERSON DAVIS PARISH

B. D. Finley et al's No. 1 Clarphy Lognion, SW NW Sec. 22-10s-4w, 800 ft. N, 50 ft. W of SW NW ..... Drlg. 5,210 ft.
Humble O. & R. Co.'s No. 3 Devilbiss, 1,850 ft. S, 250 ft. W of NE cor. Sec. 14-9s-4w ..... T.D. 7,843 ft.; P.B. to 7,100 ft.; drlg. new hole 7,455 ft.

JENNINGS—ACADIA PARISH

Yount Lee Oil Co.'s No. 12 Housiere-Latrielle, Sec. 47-9s-2w, 300 ft. E of No. 11 ..... Drlg. rock 5,103 ft.

EAST BATON ROUGE PARISH

British-American Oil Co.'s No. 1 Louisiana, 2,750 ft. NE NW cor. Sec. 79, and 1,700 ft. N of NE Sec. 79, in Sec. 6-8s-1e ..... Rigging up.

LEESVILLE—LA FOURCHE PARISH

Texas Co.'s No. 7 L.L.E., 2,921 ft. S, 300 ft. W of NE cor. Sec. 27-21s-22e ..... No report.

PORT BARRE—ST. LANDRY PARISH

Campbell et al's No. 1 J. E. Jeonsonne, Sec. 7-6s-5e, 30 ft. N of S line in center E and W of 20-ac. tract. Drlg. 3,250 ft.
Texas Co.'s No. 17 Botney Bay, 1,800 ft. S 8 deg. W, 600 ft. N 82 deg. most southern NE 560 deg. tract, Sec. 4-6s-5e ..... Rigging.

PLAQUEMINES PARISH

Texas Co.'s No. 9 Garden Island Bay, 4,791 ft. S, 2,504 ft. W of NE cor. Sec. 104-23s-32e ..... Drlg. gumbo 1,858 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 1 Lacey Frank, 1,640 ft. N, 1,175 ft. W, SE cor. Sec. 16-10s-4e ..... Derrick.

STARKS—CALCASIEU PARISH

Gulf Ref. Co.'s No. 11 Lutcher-Moore (D.D.), 1,270 ft. W, 325 ft. N of SE cor. NE Sec. 19-9s-12w ..... Pulling screen to deepen 4,277 ft.
Union Sulphur Co.'s No. 2 Industrial, 1,245 ft. N, 330 ft. E of SW cor. Sec. 30-9s-12w ..... Sidetrack 4,413 ft.; T.D. 4,832 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 723 fee (W.O.), 1,170 ft. N, 640 ft. W of SE cor. SW NW Sec. 29-9s-10w ..... T.D. 4,273 ft.; P.B. to 3,079 ft.; drlg. deeper 3,173 ft.
Union Sulphur Co.'s No. 757 fee, Sec. 29-9s-10w, 300 ft. W of C section ..... Drlg. sand 5,066 ft.
Union Sulphur Co.'s No. 783 fee, Sec. 29-9s-10w ..... Salt 5,117-5,761 ft.; sidetracking at 4,252 ft.; drlg. 4,509 ft.
Union Sulphur Co.'s No. 785 fee, 336 ft. N, 703 ft. E of center of Sec. 29-9s-10w ..... Sand 3,485 ft.; flowed 720 bbls., ½-in. choke.

ST. BERNARD PARISH

Southern Sulphur Co.'s No. 1 Lake Lery, 400 ft. W, 500 ft. N, SW cor. Sec. 28-13s-15e ..... Drlg. 680 ft.
Southern Sulphur Co.'s No. 1 State Lake Bargne, 350 ft. N, 230 ft. E, SE cor. Sec. 33-13s-15e ..... Drlg. 740 ft.

ST. LANDRY PARISH

Gaunch Synd.'s No. 1 Lewis, 300 ft. N and E of SW cor. NW NE Sec. 29-5s-6e ..... Derrick.
H. H. Hotchins Lbr. Co.'s No. 1 Whiteman Lbr. Co., 250 ft. out of SW cor. NE Sec. 15-5s-4e ..... W.O.C. 710 ft.

ST. MARTIN PARISH

E. R. Bram et al's No. 1 Toby, 2,600 ft. northwesterly along Bayou Teche from S, or out of SE cor. of Sec. 105, being point where bayou crosses twp. line, thence northeasterly at right angles 660 ft., in Sec. 105-8s-5e ..... Drlg. shale 3,203 ft.
Standard Oil Co. of Kansas' No. 1 E. B. Hopkins, Sec. 33-10s-4e ..... Cmtd. 6,010 ft.

TERREBONNE PARISH

Texas Co.'s No. 6 State Bay-St. Elaine, 700 ft. S of No. 3, Sec. 17-22s-18e ..... Drlg. sand 3,928 ft.

VERNON PARISH

E. Dawson's No. 1 Delta Land & Timber Co., C SW SW Sec. 2-1n-11e ..... T.D. 2,820 ft.; sidetrack 2,615 ft.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 7 Wilburn, 625 ft. N 60 deg. W, 1,165 ft. N 29 deg. E, SE of Lot 2, Sec. 9-11s-12e... Drlg. sand 923 ft.

TEXAS

MISCELLANEOUS WILDCATS

AUSTIN COUNTY

Turnbull et al's No. 1 Watson, Stephen F. Austin Sur. No. 6, 150 ft. out of SE cor. of 115.4-ac. tract ..... Drlg. shale 5,801 ft.

BRAZORIA COUNTY

Danciger O. & R. Co.'s No. 2 Hunt, 6,550 ft. E line, 5,550 ft. S line, W. Carson Sur. ..... S.D. 8,053 ft.

BRAZOS COUNTY

H. Elliott et al's No. 1 W. F. Odom, near center of 379-ac. tract in SW cor. of Isaac Curll Sur. ..... Derrick.
F. H. Scott's No. 1 Klintworth, I. Curd Sur., 300 ft. from N line, 400 ft. from E line ..... S.G. 1,144-55 ft.; drlg. 1,210 ft.

CHAMBERS COUNTY

Mills & Jones' No. 1 Gau, John S. Roberts Sur., 255 ft. W. 1,052.72 ft. S of NE cor. 138-ac. tract ..... Drlg. shale 5,620 ft.
Smith & Lavender's No. 1 McCormick, F. Ludlow Sur., 150 ft. NE cor. ..... Derrick.

COLORADO COUNTY

Humble O. & R. Co.'s No. 1-C Powell, I.&G.N.R.R. Sur., 1,086 ft. E, 573 ft. S of NW cor. Blk. 48..... Rigging.
Plymouth Oil Co.'s No. 1 Broussard, 2,300 ft. N and 426 ft. W of SW cor. Sec. 47, I.&G.N. Sur. ..... Abd. 6,193 ft.
Weimar Oil Co.'s No. 1 Miller ranch, approx. center H.&T.B. Sur. No. 9 ..... Derrick.

FORT BEND COUNTY

Fresno Oil Corp.'s No. 1 M. T. Wood, T. Gleason Sur., center of 10-ac. tract (Blk. 474) ..... T.D. 4,701 ft.; sidetracked at 3,880-5,052 ft.; abd.

GRIMES COUNTY

Cambrian Oil Co.'s No. 1 W. V. Sangster, John Moore Sur., 300 ft. out of most westerly NW cor. of 218-ac. tract ..... Derrick.
Foster et al's No. 1 Quinn, 7,100 ft. from W line, 2,900 ft. from N line of S. F. Austin Sur. ..... Spudding.
Petroleum Southwest Co.'s No. 1 Greer, Pat O'Connor Sur., 300 ft. from W line, 400 ft. from N line of 150-ac. tract ..... Abd. sticky shale 5,011 ft.

HARRIS COUNTY

Cockburn Oil Corp.'s No. 1 C. Marcus, Wm. Hardin Sur., 1,500 ft. S along E line of 55-ac. tract from Buffalo Bayou and 300 ft. W at right angles ..... Drlg. shale 4,838 ft.

H. B. Jordan's No. 1 Cochran, J. L. Jordan Sur., 1,950 ft. S line, 1,930 ft. E line ..... Standing 2,945 ft.
McCarthy et al's No. 1 Harrison, 500 ft. S, 500 ft. E of NW cor. of Wm. M. Jones Sur. ..... Drlg. shale 6,210 ft.
Russell et al's No. 1 Burt & Griffith, S. Keely Sur., 200 ft. N line, 200 ft. E of highway ..... Derrick.
Jack Schultz et al's No. 1 West Prod. Co., Geo. Dedrick Sur., 800 ft. W of R.R., 100 ft. N of S line .... T.D. 3,414 ft.; cmtd. 7-in. csg. 3,400 ft.; drilled plug and set 29 ft. screen; est. 14,000,000 ft. gas showing wtr.

H. H. Sloan et al's No. 1 J. Hodges, 200 ft. S, 900 ft. W of intersection of Crosby Huffman, in Frederick Ranken Sur. ..... Moving in.
S. J. Sloan's No. 1 Ellis, 653 ft. from N line, 1,130 ft. from W line of Sec. 22, Geo. Ellis Sur. ..... Drlg. shale 1,335 ft.
E. E. Young et al's No. 1 Paddock, J. Cunningham Sur., 300 ft. W of E line of Blk. 41 on line dividing Blks. 46 and 47 ..... Drlg. shale 610 ft.

JACKSON COUNTY

Continental Oil Co.'s No. 1 Vincek, V. Garcia Sur., 1,800 ft. W, 200 ft. N of SE cor. of Lot 17, Bennett Subd. ..... Drlg. sand 2,795 ft.

JASPER COUNTY

Turnball & Erwin's No. 1 Green, W. B. Green Sur., 2,269.3 varas S, 857 varas W of NE cor. ..... Rigging.

JEFFERSON COUNTY

Sun Oil Co.'s No. 1 Paggi, 990 ft. W, 1,610 ft. N of SE cor. of T.&N.O. Sur. No. 32 ..... Sand 6,002-23 ft.; running csg. to test.

LIBERTY COUNTY

Thomas et al's No. 1 A. Ercke, 600 ft. E of W line, 2,350 ft. N of S line, A. H. Ercke Sur. in Reason & Green Sur. ..... Drlg. 2,920 ft.
J. K. Seale, tr.'s No. 1 T. W. Finley, A. B. Hardin Sur., 330 ft. out of SW cor. of 25-ac. tract ..... Drlg. 5,000 ft.
Fount Lee Oil Co.'s No. 1 E. W. Boyt, H.&T.C. Sur., Sec. 17, 300 ft. from S line, 2,440 ft. from E line of section ..... Drlg. shale 2,900 ft.

MATAGORDA COUNTY

Continental Oil Co.'s No. 1 Beker, 400 ft. out of SW cor. Lot 17, Robbins & Middle Subd., J. W. Criswell Sur. ..... Blew out 6,003 ft.; D.S. stuck.
Oils Consolidated, Inc.'s No. 1 Hawkins, Daniel McCarthy Sur., 1,240 ft. NE, 350 ft. NW of S cor. .... Moving in.
United North & South Dev. Co.'s No. 1 Unit 6 (No. 3 Stoddard), 25 ft. each way out of NW cor. of Lot 19, Buckeye Townsite ..... T.D. 7,872 ft.; set 23 ft. screen 7,873 ft.; swbd. H.W.

United North & South Dev. Co.'s No. 1 Unit 14 (No. 1 Dr. Plotner), 1,310 ft. SE of No. 1 Stoddard and 136 ft. W of right of way of Collegeport branch of St. L.&B.M.R.R., Buckeye ..... Set 216 ft. of 6-in. screen 7,919 ft.; swabbing; salt wtr.

United North & South Dev. Co.'s No. 1 Unit 25, 1,325 ft. S, 1,000 ft. E of No. 1 Unit 6 ..... Cutting and pulling screen 7,870 ft.; collapsed screen.

MONTGOMERY COUNTY

L. C. Thorpe's No. 1 Sutherland, 2,450 ft. E line, 350 ft. N line of C. McRay Sur. ..... Drlg. 1,750 ft.

POLK COUNTY

Dick Schwab's No. 1 Kirby & West, Geraldus Thomas Sur., 1,000 ft. N of N line of P. A. Sublett Sur., and 2,000 ft. W of E line of Thomas Sur. ..... Rig.
C. E. Stewart's No. 1 Stephenson, E. Stevenson Sur. (Abst. 761), 1,833 ft. from N line, 920 ft. from W line of 217 acres ..... Rig.

REFUGIO COUNTY

Humble O. & R. Co.'s No. 8 O'Connor, 13,350 ft. N of S line of lease and 12,727 ft. W of E line of Florentine Rios Sur. ..... Drlg. shale 3,139 ft.
Texas Co.'s No. 1 Rooke, J. M. Alcritte Sur., 7,500 ft. S 53 deg. W, 850 ft. S 37 deg. W of N cor. Sur. ... Drlg. shale 1,300 ft.

SAN JACINTO COUNTY

Piedmont Oil Co.'s No. 1 Foster Lbr. Co., 500 ft. out of NW cor. of G. Taylor Sur. ..... Drlg. 4,475 ft.; tested wtr.

TYLER COUNTY

Texas Crude Oil Co.'s No. 1 Creswell, B. Enloe Sur., 300 ft. S of NE cor. of survey and 400 ft. W of E line ..... Drlg. shale 1,750 ft.

VICTORIA COUNTY

Gulf Prod. Co.'s No. 4 Keeran, Martin DeLeon Sur., 3,320 ft. N 41 deg. 48 min. W, parallel to NE line of lease from No. 1 ..... Drlg. wtr. sand 6,297 ft.
Stoneleigh O. & G. Co.'s No. 1 Zimmer, R. Manchola Sur., 1,007 ft. SW line, 645 ft. SE line ..... Drlg. 2,875 ft.
The Texas Co.'s No. 6-A McFaddin, 5,600 ft. from NE line, 250 ft. from SE line of A. J. Gray ..... Gas sand 3,039-49 ft.; pumping wtr. and mud into sand to kill pressure.

The Texas Co.'s No. 7 McFaddin, 4,600 ft. S 15 deg. W, 450 ft. N 75 deg. W at right angles from the NE cor. of the A. J. Gray Sur. ..... T.D. 1,176 ft; blowing gas and mud.

WALLER COUNTY

Franklin et al's No. 1 A. C. Blumberg, John Baker Sur., 466 ft. out of NE cor. of most northerly 100-ac. tract ..... Drlg. shale 2,744 ft.
Hobson & Moore's No. 1 Peters, Justo Liendo Sur., 590 ft. W of creek and 1,144 ft. N of S cor. ..... Drlg. shale 2,910 ft.
Texas Seaboard Oil Co.'s No. 1 R. Schwartz, Isaac Best Sur., 1,050 ft. from S line, 1,100 ft. from E line of 800-ac. tract ..... Abd. 4,060 ft.; salt wtr.

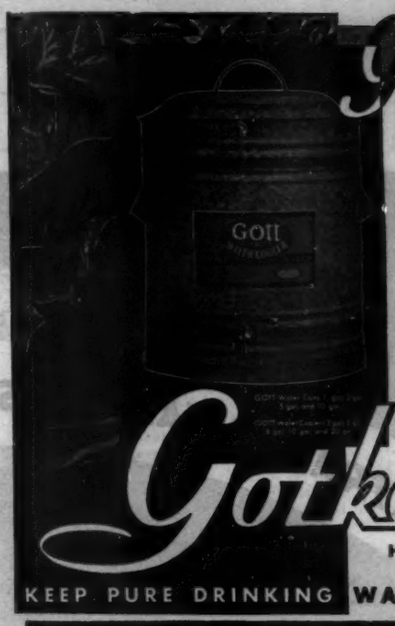
WASHINGTON COUNTY

Clark & Cowden's No. 1 F. A. Ammons, S. Woodward Sur., 16,500 ft. from N line, 775 ft. from E line of survey ..... Abd. derrick.
George W. Strake's No. 1 Henry Wehmeyer, M. Byrd Sur., 3,000 ft. from W line, 500 ft. from N line of 599.50-ac. tract ..... Drlg. shale 3,364 ft.

WHARTON COUNTY

Boggs & Hammond's No. 1 C. T. Kountze, Morris & Cummings Sur., 1,250 ft. S line, 2,750 ft. E line .... Drlg. 475 ft.
Nabers et al's No. 1 Lurker, 210 ft. out of SE cor. of N½ SW Sec. 58, E.T.R.R. Sur. ..... Washing to bottom 5,026 ft.
Pure Oil Co.'s No. 1 W. Garrett, Sec. 28, 4,456 ft. SE, 1,690 ft. NE of W cor. ..... Drlg. shale 3,080 ft.
Pure Oil Co.'s No. 1 A. J. Wilder, T. W. Heard Sur., 509, 3,575 ft. SE, 1,690 ft. NE from W cor. of Sec. 28. Drlg. sand and shale 2,041 ft.
Pure Oil Co.'s No. 1 Stewart, 2,419 ft. NW, 1,650 ft. NE of S cor. of Sec. 35, Morris & Cummings Sur. ..... T.D. 2,015 ft.; set whipstock 2,385 ft.; fishing 6,860 ft.; T.D. 8,067 ft.

Pure Oil Co.'s No. 1 Chas. T. Kuntze, 2,182 ft. from NW line, 467 ft. from SW line, Sec. 37, Morris & Cummings Sur. ..... Drlg. shale 6,557 ft.
Pure Oil Co.'s No. 1 W. H. Lancaster, Morris & Cummings Sur., Sec. 23, 1,650 ft. NW, 1,600 ft. SW of E cor. of section ..... Drlg. shale 3,345 ft.
Pure Oil Co.'s No. 1 Wallace Houston, 358 ft. SE of NW line and 1,690 ft. NE of SW line, Sec. 28, (T. W. Heard Sur.) ..... Derrick.
Pure Oil Co.'s No. 1 Isaac Weaver, J. M. Brownson Sur., Sec. 22, 1,650 ft. out of N cor. of section .. Drlg. shale 3,455 ft.
Smith, McDannald and Pure Oil Co.'s No. 1 B. M. Yeamans, 330 ft. out of N cor. of B. M. Yeamans Sur., Abst. 913 ..... Drlg. shale 2,125 ft.
Smith & McDannald and Shell Pet. Corp.'s No. 1 Ridgeway, 1,980 ft. from S, 660 ft. from W of NE cor. Sec. 5, H.&T.C. Sur. ..... T.D. 7,541 ft.; reaming to bottom from 7,425 ft.



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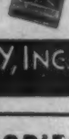

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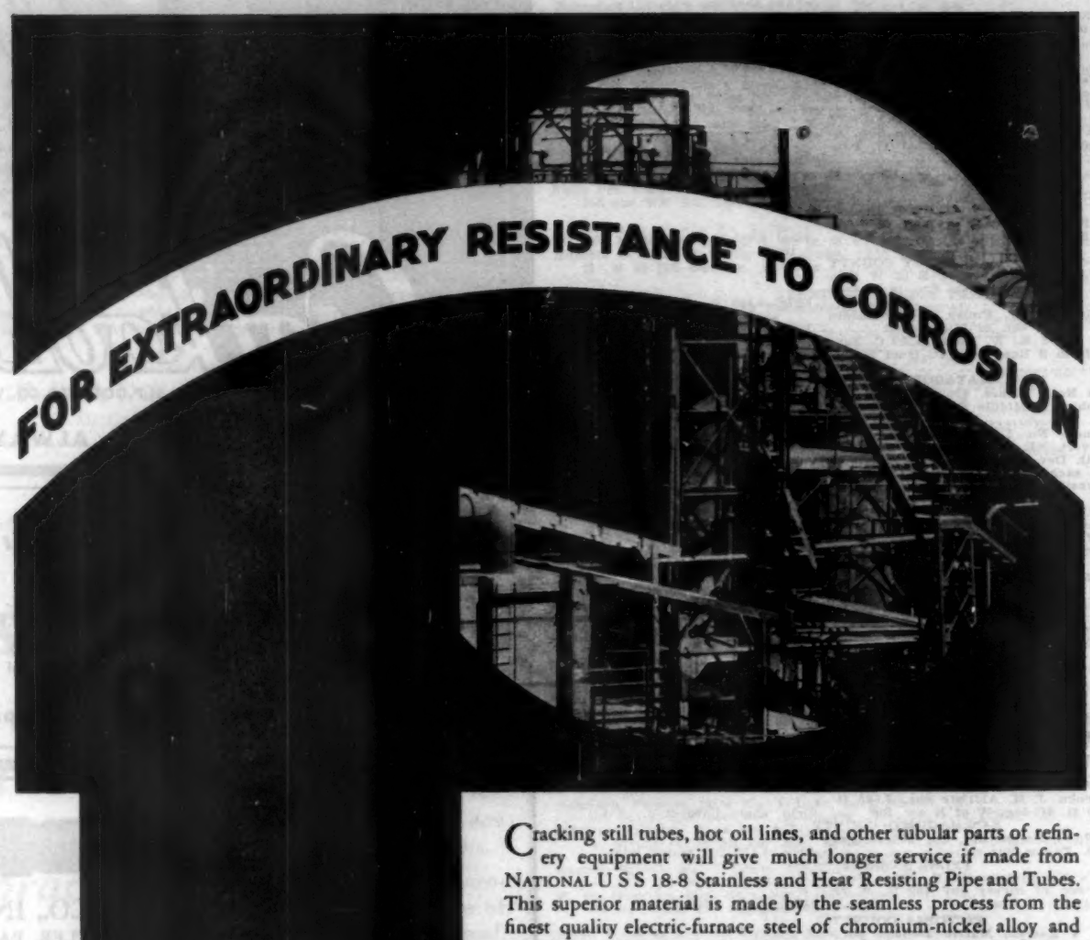

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NATURAL GAS DEVELOPMENTS

International Gas Day and A.G.A. Convention

The official program for the International Gas Conference and fifteenth annual convention of the American Gas Association at Hotel Stevens, Chicago, September 25-29, has been completed. The first general session on Tuesday will be entirely devoted to the international feature, the program for which follows:

International Gas Conference—Tuesday, September 26, 1933, 10 a.m., Grand Ballroom, Hotel Stevens.

Call to order by President Arthur Hewitt, Toronto, Ontario.

Welcome to Chicago by Rufus C. Dawes, president, A Century of Progress; Hon. E. J. Kelly, mayor of Chicago.

Address: "The Gas Industry From the British Standpoint," by F. P. Tarratt, president, the Institution of Gas Engineers, Newcastle-upon-Tyne, England.

Address: "Present Condition of the French Gas Industry," by A. Baril, vice president, International Gas Union and past president of French Gas Association, Paris, France.

Address: "The Purpose of International Collaboration in the Gas Industry," by Dr. Fritz Escher, president, International Gas Union, Zurich, Switzerland.

Greetings from the Belgian Gas Fraternity, by H. de le Paulle, president, Belgian Gas Association, Brussels, Belgium.

Address: "The American Gas Industry," by Arthur Hewitt, president, Toronto, Ontario.

The Natural Gas Department program follows: Natural Gas Department Session, Monday, September 25, 1933, 9:30 a.m., North Ballroom, Hotel Stevens.

Annual meeting, main technical and research committee (open meeting), H. C. Cooper, chairman, Hope Natural Gas Co., Pittsburgh, Pa.

Annual meeting, natural gas department, 11 a.m., North Ballroom, Hotel Stevens.

Opening remarks and chairman's address, George W. Ratcliffe, chairman, Manufacturers Light & Heat Co., Pittsburgh, Pa.

Report of main technical and research committee, H. C. Cooper, chairman, Hope Natural Gas Co., Pittsburgh, Pa.

Report of nominating committee and election of officers, T. J. Strickler, chairman, Kansas City Gas Co., Kansas City, Mo.

Address: "Taxation as It Relates to Utility Companies," by Paul S. Clapp, Columbia Gas & Electric Corp., New York.

Second Session

Monday, September 25, 1933, 2 p.m., North Ballroom, Hotel Stevens.

Address: "Some Legal Problems Peculiar to the Production and Transportation of Natural Gas Arising Out of the Economic Depression," by G. J. Neuner, Panhandle Eastern Pipe Line Co., Kansas City, Mo.

Address: "Rate Schedules for Load Building," by F. C. Hamilton, Henry L. Doherty & Co., New York.

Address: "Selling the Value of Natural Gas," by E. M. Tharp, Ohio Fuel Gas Co., Columbus, Ohio.

Address: "The Generation of High Calorific Value Gas as a Substitute for Natural Gas for Emergency Peak Load Service," by Frank Wills, Pacific Gas & Electric Corp., San Francisco, Calif.

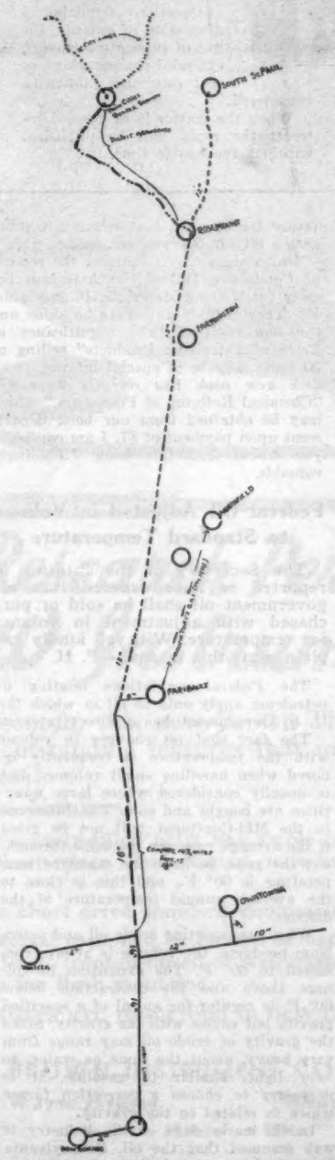
Address: "Natural Gas as a Competitive Fuel," by Harry E. Randall, United Gas Public Service Co., Houston, Tex.

Address: "Relation Between Gas Reserves Developed and Undeveloped and Market Requirements," by J. H. Dunn, Lone Star Gas Co., Dallas, Tex.

Closing remarks and adjournment.

Minnesota Extensions of Northern Natural Gas Co.

The 14½ miles of 18-inch from the Rochester take-off on the Minnesota



Northern Natural Gas Co.'s line to Faribault, Minn., is being completed this week. It may be extended to the Twin Cities.

K. C. GAS BONDS

JEFFERSON CITY, Mo., Sept. 9.—The state public service commission has set the application of the Kansas City Gas Co. for permission to issue $2,180,000 principel amount bonds for oral argument here September 14.

Lone Star Reduction Will Be Firmly Opposed

DALLAS, Tex., Sept. 11.—Reduction in gate rates of 20 per cent, as favored by W. C. Fitzhugh, assistant director of the gas utilities division of the State Railroad Commission, will be opposed by the Lone Star Gas Co., it was indicated in a statement of L. B. Denning, president of the company, received by W. W. Simpson, manager of the Municipal Gas Co., as follows:

"Regardless of the recommendation of Mr. Fitzhugh, counsel for the railroad commission, there is no thought in the minds of the Lone Star Gas Co. officers of any reduction in the city gas rate at the present time nor in the immediate future.

"With revenues reduced as they have been during the last several years owing to the general depression and the low price of competitive fuel oil, the company has not earned a fair return upon the ridiculously low valuation reported by the commission's engineers.

"Manifestly with the increase in operating expenses due to the compliance with the NRA code, earnings will be further reduced and the situation further aggravated. Should the recommendation of Mr. Fitzhugh be followed, when the case has been judicially reviewed by the courts, the company will show that it is justly entitled to a minimum city gas rate of not less than 45 cents instead of the existing 40-cent rate."

Muskegon Gas Line Being Completed Through Field

MUSKEGON, Mich., Sept. 9.—A new 15,000-foot gas pipe line will be completed next week by the Continental Motors Corp. connecting several oil and gas producers on the south side of the Muskegon River flats with the Lima Oil Corp. compressor station on the Margaret Figge property in Section 9, Muskegon Township, on the north side of the river flats.

The Lima corporation last month delivered about 7,000,000 feet of gas to the Continental from its wells on the river flats and wells of the Johnson Oil Refining Co. on the John Thompson lease in Laketon Township. This limited supply is expected to be increased to more than 1,000,000 feet a day with casinghead and dry gas from a number of Continental wells in Sections 15 and 22, Muskegon Township, near the end of the Jackson Street road.

The Michigan Public Utilities Commission is seeking to effect a compromise between the Big Rapids Gas Co. and Taggart Brothers, Inc. so that the latter may start soon furnishing the city with gas from two wells completed some time ago in Austin Township, Mecosta County.

NEW MUNICIPAL SYSTEM

FORT WORTH, Tex., Sept. 11.—The new municipal gas system at Cross Plains in Callahan County is almost completed. Consumers are to pay 35 cents per 1,000 feet. It is estimated that between 250 and 350 meters have already signed for the new system, which will take the gas from the wells located in the Cross Plains area.

H. C. ABELL RESIGNS

H. C. Abell, director and executive in the Electric Bond & Share group of public utilities, has resigned all offices and directorates in the system and will retire from active business. Besides being president of National Power & Light Co., Mr. Abell was a vice president of Electric Bond & Share and served many other companies in the system as director and official. Mr. Abell, who joined Electric Bond & Share in 1921, and later became president of the American Gas Association, entered the utility field following the Spanish-American War, in which he served.

Northern Natural Loans Renewed for Six Months

Of the $17,000,000 in bank loans of the Northern Natural Gas Co. due on September 1, $16,750,000 has been renewed for six months, with options for extensions beyond that date. The difference represents $250,000 loaned by a bank in Detroit, since closed, which the company arranged to pay.

The loans are in the form of unsecured notes of the issuing company, guaranteed by the three controlling companies, the United Light & Power Co., the North American Light & Power Co. and the Lone Star Gas Corp. Northern Natural Gas has no other indebtedness.

The book value of the property is about $38,500,000, the liabilities other than bank loans consisting principally of capital stock and surplus in addition to usual current or deferred items. The company operates nearly 2,000 miles of natural gas pipe lines drawing gas from the Southwest Kansas and Texas Panhandle fields and serves eastern Nebraska, central Iowa, southeastern Minnesota and southeastern South Dakota.

The company was organized in 1930, United Light & Power and North American Light & Power taking shares of 35 per cent each and Lone Star Gas the remaining 30 per cent.

Gas Companies Appeal to State Supreme Court

The Lone Star Gas Co. and Community Natural Gas Co. have appealed to the Oklahoma State Supreme Court from a corporation commission order for a reduction in gas rates in six Oklahoma towns.

The record filed with the court consisted of 24 volumes, giving valuations, appraisals and testimony of engineers. Attorneys for the companies alleged the reductions would result in confiscation of property and were insufficient to return costs of operation and a fair profit.

The commission recently ordered the Lone Star to reduce its gate rate to the Community Natural, the distributing company, from 40 to 30 cents a thousand feet, and the Community Natural to pass the saving on to the consumer.

PRATT MUNICIPAL PLANT

PRATT, Kans., Sept. 11.—Whether Pratt will have a municipal plant for distribution of natural gas awaits the decision of chemists. The natural gas from the Cunningham Field has been sent to the University of Kansas laboratory for analysis. The city commission is favorable to the construction of a distribution system.

HELIUM IN RUSSIA

A Washington news service says confidential word has just reached the State Department that deposits of helium have been discovered in six different districts of Russia and that the potential Russian supply is said to be greater than that of the Texas fields.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the questions is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Control of Hypochlorite Treating and Preparing Solutions

Would appreciate your advising in detail tests which may be used daily on hypochlorite treating towers; the manner in which the alkalinity and chlorine are determined, and at what alkalinity is the chlorine freshly prepared supposed to be the most active? Is there any method other than using sulphur for a breakout when pressure distillate is treated with doctor solution?—D. L. W.

Hypochlorite solutions for the treatment of gasoline may be prepared by dissolving chlorine in caustic soda or milk of lime. The directions given below are from the article, "Hypochlorite Process in Refining," by Dr. S. F. Birch, The Oil and Gas Journal, May 23, 1929. The calcium preparation is usually cheaper:

"The sodium hypochlorite solution is prepared by passing chlorine into a 10 per cent solution of caustic soda contained in a large cast iron vessel surrounded by cold water (or provided with cooling coils) and vigorously agitated. The temperature is maintained at approximately 100° F. and the chlorine added until the free alkali content, determined chemically, reaches 4 gm. per liter. In this way a 2N stock solution is prepared which is then diluted to 0.34N, the usual working strength, and contains roughly the required amount of free alkali. To prepare approximately 3,000 gallons of 2N sodium hypochlorite solution, 2,800 pounds of caustic soda, 3,000 gallons of water and 2,300 pounds of chlorine are required. On dilution this gives 18,000 gallons of 0.34N solution of the correct alkalinity.

"Towards the end of the chlorine adsorption the flow of chlorine should be reduced and stopped altogether while tests are being made as it is very easy to exceed the amount required. Once a batch has become overchlorinated it rapidly decomposes with considerable evolution of heat; it is then quite useless.

"Calcium hypochlorite solution is prepared in very much the same way as sodium hypochlorite except that lime is used instead of soda. Quicklime is first slaked in vessels which are mechanically agitated, 2,680 pounds of quick lime being added to 1,500 gallons of water. The milk of lime produced has a specific gravity of 1.10 and is pumped to the absorbers where it is diluted with another 1,500 gallons of water which have been used to wash out the slaker. The specific gravity of this solution (or rather suspension) is then 1.05. The chlorine addition is carried out in exactly the same way as in the preparation of the sodium salt, an absorber holding 3,000 gallons taking five hours for completion in winter and three hours in summer (due to the extra pressure in the chlorine container).

"The flow of chlorine is reduced towards the end of the reaction and the alkalinity carefully controlled by analyses. Towards the end of the operation the solution becomes noticeably pink in color owing to the oxidation of traces of manganese salts to permanganate. This color change is a useful guide to the operator. When finished the batch is run to settling tanks where it is allowed to remain for at least 12 hours. The stock solution, prepared in this way is roughly 2N, has a specific gravity of 1.10 and is saturated with lime, the solubility of which is approximately 1.3 gm. per liter or .04N."

The preliminary washing (first water, then alkali) of gasoline for hypochlorite treating is important as hydrogen sulphide and free sulphur are removed, and a similar washing should follow the contact with hypochlorite.

The inspection of the several sections of the treating unit and the solutions should be made several times each day and the solutions replaced or strengthened.

Any of the several analytical methods for chlorine may be adopted to the hypochlorite solutions. One method is to add an excess of N/10 arsenious acid and then titrate the excess with N/10 iodine, computing the titration in the presence of starch.

The alkalinity is found by running against a standardized sulphuric acid solution. One method provides for the removal of chlorine by pure hydrogen peroxide. A 10 c.c. sample is treated with 3 c.c. of the peroxide and this is titrated with N/5 or N/10 sulphuric acid in the presence of a drop or two of phenolphtholein indicator solution. The alkalinity should not vary beyond the limits of 0.5 to 3.0 grams free sodium hydroxide per liter, or 0.17 to 1.00 pound per barrel.

Any of the soluble sulphides, especially sodium, may be used to replace sulphur in the doctor treatment. Some plants make use of a part of the gases from the stills and others use a small quantity of the sour distillate. All that is necessary is to have the reaction under control, with chemical examination as a part of the routine inspection.

The sour distillate method is easier to handle than the gas. This is often due to the fluctuations in gas pressure. A small part of the distillate stream is taken from the line as it enters the treating unit, and then introduced at the "doctor break" stage. The rest of the operation is the same as if sulphur were used.

Literature Relating to Specifications and Significance of Tests

I am interested in obtaining a book dealing with specifications of petroleum products; something quite fundamental, explaining initial boiling point, viscosity, etc. Any suggestion you might have along this line will be greatly appreciated.—M. J. L.

As to literature concerning specifications for petroleum products, I refer you to the Federal Standard Stock catalog which may be obtained from the Superintendent of Documents, Washington, D. C., the separate parts being sold at 5 cents each. That is, the Specifications for U. S. Motor Gasoline may be obtained for 5 cents; that relating to lubricating oil for 5 cents, etc.

I also suggest you examine the reports of Committee D-2 of the American Society for Testing Materials, Philadelphia, Pa. They publish numerous bulletins and the one entitled "The Significance of Tests of Petroleum Products" selling at 50 cents may be of special interest.

A new book has recently appeared, "Chemical Refining of Petroleum," which may be obtained from our book department upon payment of $7. I am confident you would find this book exceedingly valuable.

Federal Oil Adjusted in Volume to Standard Temperature

The Secretary of the Interior is reported to have ordered that all government oil shall be sold or purchased with adjustment in volume for temperature. Will you kindly explain what this means?—P. H.

The Federal regulations relating to petroleum apply only to oil in which the U. S. Government has a direct interest.

The fact that oil changes in volume with the temperature is frequently ignored when handling small volumes, but is usually considered where large quantities are bought and sold. The difference in the Mid-Continent will not be great if the average runs are the same throughout the year, because the standard temperature is 60° F., and this is close to the average annual temperature of the district.

When transporting crude oil and petroleum products, the volume is always corrected to 60° F. The expansion in volume above and the contraction below 60° F. is regular for an oil of a specified gravity but varies with the gravity. Since the gravity of crude oil may range from very heavy, about the same as water, to very light, similar to gasoline, it is necessary to choose a correction factor which is related to the gravity.

In the early days of the industry it was assumed that the oil, Pennsylvania grade, had an average thermal expansion equivalent to 0.0005 per °F., and it was the practice to deduct 1 per cent of the volume for each 20 degrees above 60° F., and to add the same quantity for each 20 degrees below 60° F. Investigations since then have shown that the change in volume is not at the same rate for all oils, but that change depends upon gravity.

The U. S. Bureau of Standards has made a thorough investigation of the subject and has prepared a table of factors, which are accepted as standard, as published in the Bureau of Standards Circular 154, National Standard Petroleum Tables, and Letter Circular 160. The following is from this source:

EXPANSION COEFFICIENTS FOR PETROLEUM LIQUIDS

Products—	Group	C.E. at 60° F.	Range A.P.I.
Crude, fuel gas oil	1	0.0004	00-34.9
Kerosene, etc.	2	.0005	35-50.9
Naphtha	3	.0006	51-63.9
Gasoline	4	.0007	64-78.9
Light gasoline	5	.0008	79-88.9
Highly volatile liquids	6	.00085	89, up

The gravity range places the majority of the crude oils in Group 1 or 2; that is, C.E. either 0.0004 or 0.0005.

Publication on Oil Transportation In Pipe Lines

I desire to locate a book dealing with oil transportation in pipe lines, computation of flows and pump capacities; also, the gravities, etc. in connection with its transportation? What is a good book on the manufacture and use of lubricating oil?—R. L. H.

An excellent article on the transportation of oil in pipe lines was published in The Oil and Gas Journal, June 5, 1930, page T10, by W. G. Heltzel, under the title "Fluid Flow and Friction on Pipe Lines." This article includes the history, experimental work, mechanism of flow and friction loss formulas. A selected biblography is included. A limited number of reprints of this article are available.

The book Petroleum Production Engineering, by Uren, price $6, contains a chapter on the transportation of petroleum. Under flow of oil through pipes, theoretical considerations, the following subjects are discussed—viscous flow, critical viscosity and turbulent flow, calculations, temperature, gravity, pipe sizes, pipe line formulas, design, problems. Additional material on construction and operation are included.

A mathematical treatment of the flow of fluids is to be found in Chemical Engineering, by Badger and McCabe, price $5.

A good book on lubricating oils and their application is Practice of Lubrication by Thomsen, price $6.

The books mentioned may be obtained through the Book Department of The Oil and Gas Journal.

The Dean and Stark Method for Water Determination

The question was asked by W. G. I., as published in the issue of July 20, who designed the apparatus now used for determining water in emulsified oils? The answer should be corrected as below.—Editor.

Through an oversight, when making reference to the article in Industrial and Engineering Chemistry, 12, 486, 1920, the authors should have been stated as Dean and Stark. The trap was devised by D. D. Stark, who at the time was associated with Doctor Dean in the U. S. Bureau of Mines.

The policy of the American Society for Testing Materials does not permit the use of proper names to designate methods, so while the method was known for some time as the Dean and Stark Method, standardization by the A.S.T.M. resulted in the present title: "Water in Petroleum Products and Other Bituminous Materials."

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To Measure is to Economize

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Prorating Oil and Gas Fields by Bottom Hole Pressure Method

I seem to have missed some article or articles concerning a method of basing proration of oil fields on the bottom hole pressure of the wells. May I ask you to explain this method to me? My understanding is that this method is offered as being more equitable than any other.—E. D. E.

The bottom hole pressure method of prorating oil and gas fields was discussed at length at the February, 1933, meeting of the Mid-Continent district of the A.P.I. division of production, in a paper presented by James O. Lewis and Harry F. Wright. After describing various conditions that may be found in different oil fields the paper said:

"To meet the described conditions and others the method which the writers believe will prove most equitable and applicable is to prorate according to a factor derived from the ratio between oil recovered and the drop in pressure. It can be determined from experience that for each pound loss in bottom hole pressure certain quantities of oil can be produced from each property in a pool and for the pool as a whole. These factors can be conveniently called the 'production-pressure ratios.' It could be provided that daily allowables for the pool be set ahead for suitable periods—say 60 days—and from the factor for the pool it will be estimated what will be the drop in pressure. This total allowance would be allocated among the various properties in proportion to their factors. At the end of each period the factor should be redetermined for the ensuing period and in this wise be self-corrective. The object would be for each property to have an equal pressure drop during each period.

"The foregoing is the primary basis for the system and in the following pages the writers endeavor to test it out against the varying types of pools and conditions of development, as well as against other methods of proration that have been applied or proposed.

"The 'production-pressure ratio' of the various properties would differ widely. In one instance it might be 200 bbls. per pound drop; in another 100 bbls. per pound; and in still another perhaps 25 bbls. per pound. These variations would result partly from varying conditions in the sand, partly from well spacing, and in the case of water-drive fields the production-pressure ratio would probably change with the rate of production for the whole field. The wells in tight, thin sand would have a low production-pressure ratio in comparison with wells in more open sand. A well draining 5 acres would have a lower ratio than one in equally rich sand but draining from 10 acres. These ratios would not be arbitrary—except possibly at the very start—but would be the result of the various conditions affecting each property as determined by actual experience. They would be determined from a series of tests under conditions where the wells would be produced so as to keep uniform bottom hole pressures.

"These ratios would not be available when the field was first opened up. In order to make a start it is suggested that the allowables first be set in proportion to a factor determined by multiplying the initial flows or potentials by the proved acreage. At the end of the first period for correction it will be found that the different wells or leases —whichever is established as the unit for production purposes — will have shown different declines in pressure and different production-pressure ratios. From this experience, adjustments for the next period can be designed to equalize the pressure by cutting down the production where the pressure drop has been greater than the average and increasing it where the pressure decline has been less than the average. At each succeeding period similar corrections can be applied in accordance with the experience of the period just closed, so that the method will become self-corrective."

Leadwool Used in Making Shut-off Defeats Efforts at Removal

In December, 1931, we drilled a well in the Morse Pool, Gray County, Texas, and ran into the pay unexpectedly at 2,400 feet, 110 feet higher than an offset well. We were in an 8¼-inch hole—had not run 6⅝-inch casing. We plugged back 50 feet before we got a shutoff. We had 2,000,000 feet of gas, and getting the shutoff we used 300 pounds of leadwool. After drilling back to bottom the well made 85 bbls. natural.

Later, in cleaning the well out, we have shut most of the production off with this leadwool, and our problem is getting this leadwool out of the hole. We have used hot water, bailed the hole frequently, but we seem to not be able to get any of the leadwool. We dressed lugs out on an underreamer, but without success, as we have an 8¼-inch hole below the 6⅝-inch casing. The well now is making 15 bbls.

If you could suggest a method in getting out this leadwool we would appreciate same. On account of a small cave 35 feet off bottom, above the pay, we have hesitated in shooting.—A. T. P.

It is believed that leadwool could be removed by introducing aqua regia into the hole. This powerful acid would dissolve the leadwool, but the procedure would be accompanied by certain difficulties and dangers so serious that in the opinion of this department it would be impracticable for you to undertake it.

Pronounced hazards attend the handling of aqua regia, and it should not be done by other than experienced men. After the acid had been introduced into the hole it would have to be agitated to accomplish complete results, and in his use of a means of stirring the acid the operator almost certainly would run afoul of a patent covering methods of agitation. The acid and the fumes from it are deadly, necessitating the utmost caution against breathing the fumes or allowing the liquid to touch the flesh. They attack metals also and can work wide destruction of oil field equipment if handled by inexperienced persons.

In view of these facts, it is suggested that instead of trying to use this solvent yourself you get in touch with some chemical company, which not only could provide the acid, but experts to handle the whole operation of removing the leadwool from your well.

Why Was It Called That?

BOOM TOWN

Boom oil towns have sprung up and subsided with the rise and fall of oil fields. Authorship of the word boom to designate swift, spectacular growth or sudden prosperity is attributed to J. B. McCullogh, who, writing for the St. Louis Globe-Democrat in 1878, used it in speaking of the swelling tide of sentiment in favor of Grant for President. Mr. McCullogh believed he caught the expression from pilots on Mississippi River gunboats during the Civil War who, when the stream was overflowing its banks, referred to it as booming. There is of course a familiar oil field use of the word, adopted from the sea, to designate a spar or mast, such as is used in pipe line work. In this sense it is taken bodily from the Dutch boom, a tree.

Tests Show Loss of Oil in Pipe Lines Through Evaporation

In The Oil and Gas Journal of August 3, 1933, answering a question signed N. S. E., you gave an explanation of how losses of crude oil through evaporation occur in pipe line systems. I wonder if you could tell me more specifically how serious such losses are. Have any records been kept of tests made?—L. S. D.

Investigations made by the Bureau of Mines in 1919 and 1920 showed the evaporation loss in gathering systems was 1 per cent and the pipe line transportation loss was estimated to be 1 per cent. But producing leases at that time were not generally equipped with vapor-tight tanks and the average evaporation loss on the lease was 3.5 per cent. Thus the oil received by the pipe line gathering systems had lost on the lease a high percentage of the most volatile constituents which today are conserved on the lease and remain in the oil.

That the estimate of 1 per cent evaporation loss during transportation was low is shown by a test made by J. H. Wiggins in 1921 and published in Bureau of Mines Technical Paper 319, entitled "Methods of Decreasing Evaporation Losses of Petroleum."

The test was made on the main line of the Gulf Pipe Line Co. showing the evaporation loss between the intake of its Grayson station and the discharge of its Powderly station, a total distance of about 120 miles and passing through one "increase and decrease" single tank station at Chambers, Okla. At the Grayson and Powderly stations all of the oil was measured. The measuring system consisted of two working tanks at each station, one of which received the incoming oil, while the outgoing oil was pumped from the second tank. The tanks at Grayson and Powderly were of 55,000-bbl. capacity each and the roofs were of gas-tight construction and were equipped with breather lines.

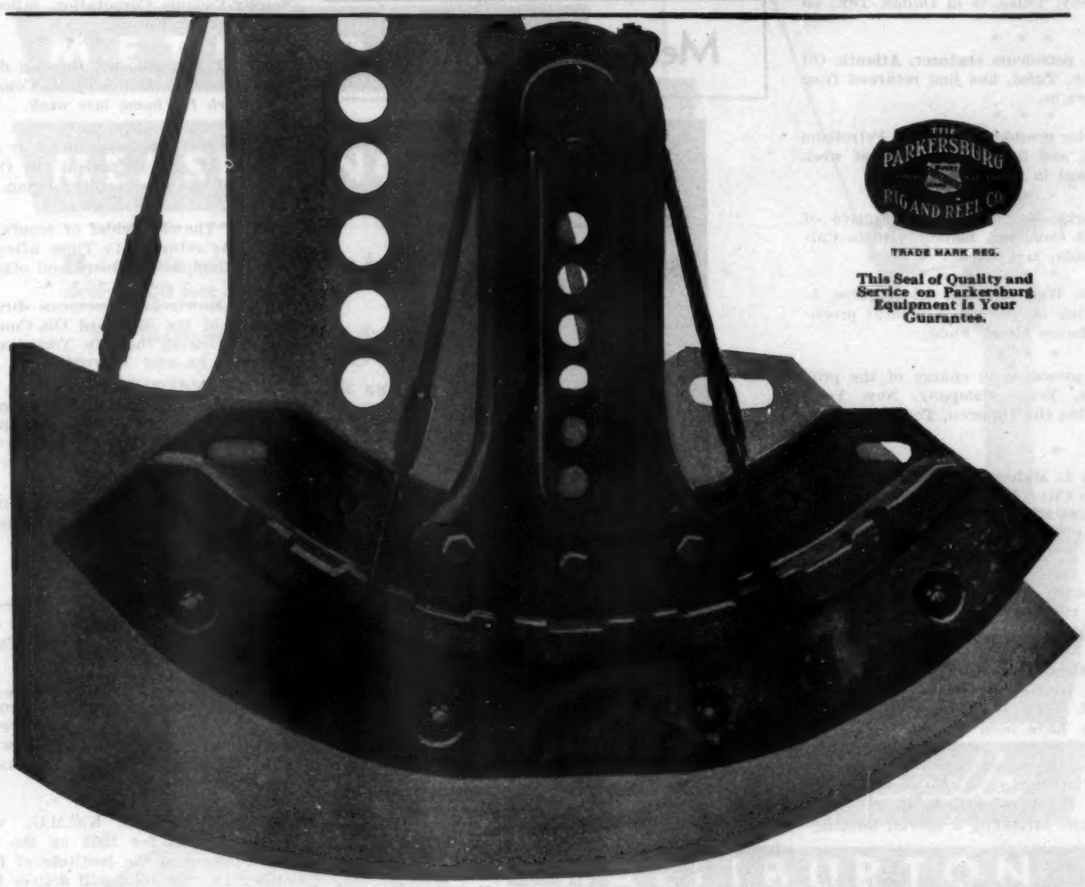
The incoming oil at Grayson had an average gravity of 38.9° Be. and was very volatile, some natural gasoline being blended with it. Most of the gasoline was unweathered, being pumped into the crude line directly from the accumulator tanks. During the test period the average amount of crude oil pumped through the main line was 15,000 bbls. daily. The test period was from August 22 to September 7, 1921, inclusive. The results obtained in this test follow:

	%
Volume lost by gravity determinations, maximum	1.22
Volume lost by gravity determinations, minimum	0.95
Volume lost determined by vapor displacement	0.65
Volume lost, average	0.91
Loss in gravity of oil pumped (38.9°-38.5° Be.)	0.4

Mr. Wiggins reported: "The pipe line evaporation losses average about 2.7 per cent for the year, the highest rate being about 3.5 per cent in summer. If all the gasoline is kept in the crude, the oil leaving the lease will be much more volatile than at present, and will probably lose from 1½ to 2 times as much under the same evaporation conditions. Pipe line evaporation losses will therefore amount to 5 or 6 per cent, as against present total losses of from 2½ to 3½ per cent."

Since the use of vapor-tight tanks in the producing fields has become general it is evident that the pipe line companies are handling a more volatile product than formerly.

Parkersburg Type "C" Counterbalance



THE PARKERSBURG RIG AND REEL CO.

TRADE MARK REG.

This Seal of Quality and Service on Parkersburg Equipment is Your Guarantee.

PARKERSBURG Type "C" Counterbalance incorporates exclusive features and has been designed with the user's convenience foremost in mind.

When servicing the well, the weight assembly is easily and quickly disengaged, thus permitting free motion of the crank. The re-engagement is also a simple operation and is accomplished by tightening the turnbuckles until the weight is in proper position.

Cast tongues on the end and back of crank mate with recesses in the main weight. Through these the torque is transmitted—the three bolts serving to hold them in engagement.

The entire assembly is compact. Simple adjustments produce the proper lead or lag. The effective counterbalance weight at the sixth hole ranges from 3,830 pounds to 8,040 pounds.

Complete information can be secured from the nearest Parkersburg representative, or by writing direct to the general offices at Parkersburg for booklet containing complete details.

The Parkersburg Rig & Reel Co.

Executive Offices and Main Plant

PARKERSBURG, WEST VIRGINIA

NEW YORK - TULSA - DALLAS - HOUSTON

343-A

PERSONAL PARAGRAPHS

Paul S. Hedrick, oil editor, Tulsa World, Tulsa, is in Missouri on his vacation.

• • •

John Green, general counsel of the Gulf companies, Houston, Tex., is spending a vacation touring Europe.

• • •

A. M. Bowman, district manager, Parkersburg Rig & Reel Company, Tulsa, is in Dallas, Tex., on company business.

• • •

Jack H. Stewart, petroleum engineer, Atlantic Oil Producing Company, Tulsa, has just returned from a vacation in Colorado.

• • •

Earl S. Porter, vice president, Amerada Petroleum Corporation, Tulsa, and family returned last week from a vacation spent in Colorado.

• • •

Frank Carr, Rocky Mountain representative of the Reed Roller Bit Company, made a trip to Calgary, Alberta, Canada, last week.

• • •

Frank G. Bowser, West Virginia oil operator, is in Lusk, Wyo., having interests in a wildcat proposition east of the Lance Creek Field.

• • •

R. Ogarrio, vice president in charge of the production department, Texas Company, New York City, has been visiting the Houston, Tex., offices of the company.

• • •

Mr. and Mrs. Dan L. Mahoney and their son have been visiting Mexico City. Mr. Mahoney is manager of the Texas division of the Stanolind Crude Oil Purchasing Company.

• • •

Felix Chappellet, of the General Petroleum Corporation, and in charge of the company's land department, is to be married in the near future to Miss Genevieve Tobin.

• • •

H. J. Haggerty, Richard Dresser, H. G. Barcroft, Paul Duke and R. H. George, Bradford, Pa., oil men, have returned home from Lake Nippissing, Ontario, where they have been fishing.

• • •

John McFadyen, vice president and western manager of the Ohio Oil Company, with Casper, Wyo., headquarters, is at the home offices of the company in Findlay, Ohio, attending a special meeting of the directors.

• • •

Bert I. Graves, general salesmanager, and J. H. Jenkins, general manager of the producing division, have been elected vice presidents of the Associated Oil Company, a subsidiary of the Tide Water Associated Oil Company.

• • •

L. F. Bayer has been appointed chairman of a newly created operating committee of the Associated Oil Company and will continue his present duties as vice president of the company and in direct charge of manufacture.

• • •

H. Leslie Parker and H. H. Hindry, of Denver, Colo., executives of the newly incorporated Midway Oil Corporation, were in Casper, Wyo., conferring with the president and general manager of the company, Sidney H. Keoughan.

• • •

Frank Firmin, of Findlay, Ohio, executive of a number of subsidiary companies of the Ohio Oil Company, is making an inspection of company properties at Rawlins, Rock Springs and Salt Lake. Mr. Firmin and family formerly lived in Casper, Wyo.

• • •

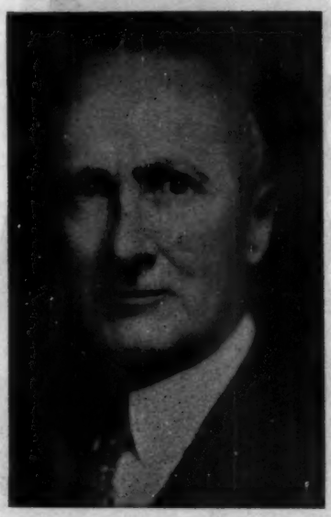
D. H. Hammick, M.A., fellow and tutor of Oriel College, Oxford, England, has been awarded one of the first Leverhulme research fellowships in order to continue his investigations on the interaction of nitro-compounds with aromatic bases and hydrocarbons.

George H. Jacques, vice president and director of Stanolind Oil & Gas Company, Tulsa, has resigned effective September 12.

• • •

H. W. Price, general manager of the J. M. Huber Company, manufacturer of carbon black, was in Casper, Wyo., en route to Cody, Wyo.

Men of the Industry



C. G. SHEFFIELD

C. G. Sheffield, vice president of the Standard Oil Company of New Jersey, and new manager of retail sales for the combined retailing operations of the Jersey company, Colonial-Beacon Oil Company, Standard Oil Company of Louisiana, and Standard Oil Company of Pennsylvania, joined the Standard organization in 1919. He was not a newcomer to the oil industry at that time, however, having entered the field in 1900, as a lubricating oil salesman on the Pacific Coast. Two years later he inaugurated tank wagon service in the State of Washington and part of Oregon, and was so successful that he soon became assistant manager of the Union Oil Company's Seattle, Wash., office. His next step took him to San Francisco, Calif., as manager of the fuel oil and asphalt department of the company, and after this he was made general sales manager.

Mr. Sheffield's work with Union Oil in developing and organization and sales record attracted the attention of Fuel Administration officials during the World War and he was called to Washington to serve as director of the distribution of oil products under the oil division of the Fuel Administration.

His work attracted the attention of A. C. Bedford, chairman of the board of the Standard Oil Company (New Jersey) and chairman of the National Petroleum War Service Committee, and in February, 1919, when the fuel oil department of the Standard Oil Company (New Jersey) was formed, Mr. Sheffield was called in to take the position of manager. In January, 1926, he was appointed one of the managers of the domestic sales department in charge of lubricating sales in the domestic field.

When the Standard Oil Company of New Jersey was incorporated, Mr. Sheffield was elected vice president and director in the marketing end of the business.

C. B. Officer, chief engineer, Sullivan Machinery Company, Chicago, was in Tulsa last week.

• • •

V. J. Potter, of Yarmouth, N. Dak., visited Casper, Wyo., representing Canadian investors in the Wyalta Oil Company.

• • •

Leslie Blumenthal, of the New York office of Socony-Vacuum Corporation, sailed from New York last week for Europe.

• • •

Prof. F. Schumacher, German delegate to the recent International Geological Congress, sailed from New York for home last week.

• • •

D. D. Stark is superintendent of the Kawasaki refinery of the Mitsubishi Oil Company, Ltd., at Ogimachi, Kawasaki City, Japan.

• • •

W. R. Thawley, chief of scouts, Gypsy Oil Company, has returned to Tulsa after a holiday spent in Washington, Baltimore and other eastern points.

• • •

J. F. Mowinckel, European director for the operations of the Standard Oil Company (New Jersey), is visiting the New York headquarters of the company.

• • •

Prof. Paul Bertrand, French geologist who attended the recent International Geological Congress in Washington, sailed from New York last Saturday for home.

• • •

J. W. Leonard, of Washington, Pa., has been making an inspection of Montana and Wyoming properties and visiting Rangely, Colo., where he controls the Raven Oil Company.

• • •

Don Leach, Mid-Continent representative for the Chicago Bridge & Iron Works, is spending his vacation with his family at the Chicago exposition and with relatives in Iowa.

• • •

D'Arcy Cashin, consulting geologist, Houston, Tex., has returned from a pleasure trip which took him through Canada and the New England States and back through Chicago. He was accompanied by Mrs. Cashin.

• • •

Sir John Cadman, K.C.M.G., will receive the Melchett medal for 1933 on the occasion of the annual dinner of the Institute of Fuel, London, on October 18. Sir John will deliver his Melchett lecture on October 4.

• • •

C. E. Kester, Irving H. Robitshek and Max J. Kaplan, of Minneapolis, Minn., officials of the Lakota Oil & Gas Company, were in Casper, Wyo., conferring with the city council on taking over the franchise of the New York Oil Company.

• • •

Frank V. Eaton, of Osage, Wyo., and Mrs. Eaton were in Casper, Wyo., last week. Mr. Eaton is an old-time operator in Pennsylvania and other states and has been looking after the interests of the Walda Oil Company at Osage for several years.

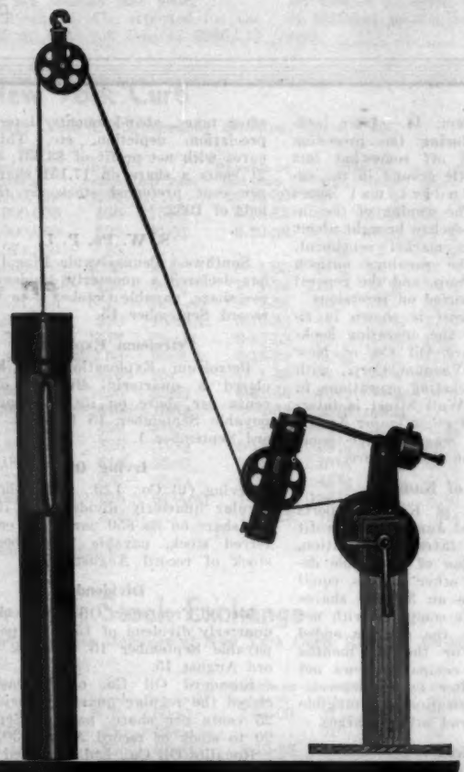
• • •

M. T. Rathvon, of the Argo Oil Company, and Mrs. Rathvon, Casper, Wyo., drove to Phoenix, Ariz., where Mrs. Rathvon will spend the winter months. From Phoenix, Mr. Rathvon drove to Deer Creek, Okla., where his company is drilling a well.

• • •

Charles Edward Munroe, chief explosives chemist of the U. S. Bureau of Mines, 84 years old, sole surviving charter member of the American Chemical Society organized in 1870, will be a guest of honor at the dinner given by that society in Chicago on September 14. Doctor Munroe is the inventor of smokeless powder and of the principle of detonation known as the "Munroe effect." Gustav Egloff, who recently returned from London, will preside at the dinner.

THE ACCEPTED AND AUTHENTIC METHOD FOR MEASURING THE DEPTH OF WELLS



■ Accurate within 2 inches in wells over 5,000 feet deep.

That in ten words explains the widespread use of the HOWCO WELL MEASURING DEVICE. It explains also why oil men, noting the operation of the device in connection with the Halliburton cementing process, asked us to supply it for general well measuring purposes.

The HOWCO WELL MEASURING DEVICE is engineered in every detail for accurate and economical measuring. . . . It embodies so many advantages that they cannot be set forth in the space here available. We suggest instead that you write for descriptive folder.

Accurate-Economical

Easy to Handle

HALLIBURTON
OIL WELL CEMENTING CO.
Duncan, Oklahoma

HOWCO
WELL MEASURING DEVICE

MARKET RECORD OF OIL SECURITIES

By A. E. Mockler

NEW YORK, Sept. 11.—After leading the market during the preceding week, the oils fell off somewhat last week and lost a little ground in the aggregate, although individual issues showed firmness. The coming of the industry under the code has brought about decided strength in market sentiment, with respect to the earnings outlook for the oils as a group, and the general market is well supported on recessions.

Considerable interest is shown in financial circles over the operating hookup between Standard Oil Co. of New Jersey and Socony-Vacuum Corp., with respect to their marketing operations in the Far East, and Wall Street is interested in reports that other major American oil companies may arrange some such ententes in the near future.

Standard of Kansas

Standard Oil Co. of Kansas reports for the quarter ended June 30 net profit of $146,442 after taxes, depreciation, depletion, amortization of intangible development costs and other charges, equal to 45 cents a share on 320,000 shares of capital stock. This compares with net loss of $271,134 in the quarter ended March 31, 1933. For the six months ended June 30 the company shows net loss of $124,692 after taxes, depreciation, depletion, amortization of intangible development costs, and other charges.

Wilcox

H. F. Wilcox Oil & Gas Co. and subsidiaries report for the six months ended June 30 consolidated net loss of $423,729 after taxes, abandonments, interest, depreciation, depletion, etc. This compares with net profit of $3,631, equal to 21 cents a share on 17,151 shares of 7 per cent preferred stock, in the first half of 1932.

S. W. Pa. P. L.

Southwest Pennsylvania Pipe Line Co. has declared a quarterly dividend of $1 per share, payable October 2 to stock of record September 15.

Petroleum Exploration

Petroleum Exploration Co. has declared a quarterly dividend of 12½ cents per share on its $25 par stock, payable September 15 to stock of record September 1.

Irving Oil

Irving Oil Co., Ltd., has declared the regular quarterly dividend of 75 cents per share on its $50 par 6 per cent preferred stock, payable September 1 to stock of record August 15.

Dividends

McColl-Frontenac Oil Co. declared a quarterly dividend of 15 cents per share, payable September 15 to stock of record August 15.

Standard Oil Co. of Nebraska declared the regular quarterly dividend of 25 cents per share, payable September 20 to stock of record August 30.

Royalite Oil Co., Ltd., declared a dividend of 50 cents, payable September 15 to stock of record August 31. This dividend is tax free.

Bandini Petroleum Co. declared the regular monthly dividend of 5 cents per share, payable September 20 to stock of record August 31.

British-American Oil Co., Ltd., declared a quarterly dividend of 20 cents per share, payable October 2 to stock of record September 15.

Net Loss for 16 Companies

The net loss for the first six months of 1933 for 16 oil companies amounted to $28,681,283 compared with a net profit of $10,901,662 for the like period of last year. A tabulation of results follows:

	First half	
	1933	1932
Atlantic Refining	L. $1,002,000	P. $3,185,000
Continental	L. 4,960,969	L. 256,502
Phillips Pet.	L. 5,324,588	L. $12,492
Seaboard Oil	P. 513,086	P. 374,810
Sun Oil	P. 1,138,982	P. 2,030,918
Tide Water Asso.	P. 174,355	P. 2,099,700
Union Oil Co.	L. *200,000	P. 1,500,000
Warner-Quinlan	L. 662,800	L. 761,580
Skelly Oil Co.	L. 2,152,968	L. 43,521
Shell Union	L. 14,105,387	L. 2,935,426
Standard of Calif.	P. 1,199,414	P. 6,916,544
Simms Pet.	L. 393,000	L. 287,157
Barnsdall Corp.	L. 1,835,299	L. 359,942
Houston Oil	L. 734,672	L. 131,534
Panhandle Pet.	L. 225,106	L. 179,700
Amerada Corp.	L. 510,024	P. 552,545

*Includes $1,350,000 nonrecurring profit.

Ohio Oil

Ohio Oil Co. and its subsidiaries report for the six months ended with June a net loss of $3,140,680 after taxes, depreciation, and other charges, compared with a net profit in the first half of last year of $4,098,198 which was equivalent after preferred dividends to 36 cents a share on the then outstanding common shares. Current assets of the company as of June 30 totaled $27,688,757 of which $1,486,936 was in cash and current liabilities amounted to $2,831,493. This compared with current assets of $32,231,626 and current liabilities of $3,104,952 on June 30, 1932.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb, based on closing quotations for Wednesday, was as follows:

Jan. 25	13.37	May 24	18.00
Feb. 1	13.26	May 31	20.51
Feb. 8	13.21	June 7	21.53
Feb. 15	13.14	June 14	35.44
Feb. 22	13.14	June 21	23.09
Mar. 1	11.91	June 28	23.86
Mar. 15	14.22	July 5	25.20
Mar. 22	12.66	July 12	25.74
Mar. 29	12.35	July 19	24.89
Apr. 5	12.60	July 26	22.25
Apr. 12	12.04	Aug. 2	20.29
Apr. 19	14.82	Aug. 9	22.29
Apr. 26	15.80	Aug. 16	21.05
May 3	16.14	Aug. 23	23.40
May 10	17.22	Aug. 30	24.04
May 17	20.20	Sept. 6	24.65

Reports

Superior Oil Corp. reported for the six months ended June 30 net loss of $259,450, compared with loss of $242,447 in the first six months last year.

Darby Petroleum Co. reported for the first six months of 1933 net loss of $566,118, as compared with net income of $123,359 in the comparable months of 1932.

Colon Oil Corp. reported for the six

Independent Oils on New York Curb

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended Sept. 2)

1933 High	1933 Low	Week ended Sept. 2 Sales	Week ended Sept. 2 High	Week ended Sept. 2 Low	Close Sept. 6	Stocks		Outstanding capital	Par value	Div. rate	Payable or last paid	1930 High	1930 Low	1931 High	1931 Low	1932 High	1932 Low
2⅝	⅛	13,600	1⅝	1⅜	1⅜	American Maracaibo	(sh)	700,000	N.P.	....	.....	4½	½	1¾	¾	¾	¼
5½	1⅛	1,000	2⅜	2⅛	2¼	Arkansas Natural Gas	(sh)	4,084,225	N.P.	....	.....	16¾	4⅝	6½	1⅞	3¾	⅝
4	1	2,700	2	1⅞	1⅞	Arkansas Natural Gas "A"	(sh)	3,522,521	N.P.	....	.....	16⅝	4⅝	6¾	1⅞	3⅜	½
4⅞	2	300	2¾	2¾	..	Arkansas Natural Gas pfd.	(sh)	2,193,000	$10	....	4- 1-32	8⅛	6¼	7	3⅞	5⅝	1½
14½	6⅛	500	14½	14⅜	..	British American Oil Corp.	(sh)	2,622,642	N.P.	20cQ	3-14-33	23	13⅝	16⅞	6¼	9¾	6¾
7⅜	¼	34,800	6⅜	5	6¼	Carib Syndicate	(sh)	579,000	25c	....	.....	2¾	⅝	2⅝	¼	¾	¼
6¼	2	44,200	3¼	3	3	Cities Service	(sh)	36,979,065	N.P.	....	6- 1-32	44¼	13	20¾	5	6⅞	1¼
30	10½	800	16¼	15⅜	15½	Cities Service pfd.	(sh)	1,125,931	N.P.	....	6- 1-31	93⅞	78¼	84¾	35⅝	53⅜	10
2½	⅝	1,300	1½	1¼	1½	Columbia Oil & Gasoline v.t.c.	(sh)	$2,000,000	$1	....	.....	¾	⅛	½	⅛	2⅛	½
4	¼	4,800	3⅛	2⅝	2¾	Colon Oil	(sh)	2,200,000	N.P.	....	.....	8¼	1⅛	3⅛	¼	1¼	¼
2⅞	1	No sales	..	..	..	Consolidated Royalty Oil Co.		$5,527,880	$10	5cQ	1-25-33	5⅞	2	2¾	1	2	1
7½	⅞	No sales	..	..	..	Cosden Oil	(sh)	323,950	N.P.	....	.....	74¾	1¼	3¾	⅝	2⅞	¼
7¼	2½	400	5⅜	5	5¼	Darby Petroleum	(sh)	609,696	N.P.	....	10-15-30	21¾	4¼	5	1¾	7⅛	1⅜
2¾	⅞	No sales	..	..	..	Derby Oil & Refining	(sh)	500,000	N.P.	....	.....	11	2	6	1½	3	1
62	24	8,600	60	55	58½	Gulf Oil Corp.	(sh)	4,504,921	$25	....	10- 1-31	166⅞	58½	75½	25⅝	44¾	23
6½	1½	No sales	..	..	..	Indian Terr. Illum. Oil "B"	(sh)	7,090,067	N.P.	....	.....	53½	12⅝	16⅞	5	4½	1½
2	⅝	400	1¼	1¼	1¼	Kirby Petroleum	(sh)	750,000	N.P.	10c	4-15-33	3	⅞	1⅞	¼	1	⅜
1½	⅛	2,700	¾	⅝	..	Leonard Oil & Development		$50,000,000	$25	....	.....	5	¾	2	½	¾	⅛
2¼	⅛	1,500	2	1¾	1¾	La. Land & Exp.	(sh)	3,000,000	N.P.	....	.....	4¾	½	1½	¼	2½	½
9½	1¼	No sales	..	..	..	Lion Oil & Refining	(sh)	250,000	N.P.	....	10-27-30	29	4⅞	6¾	1½	3½	⅛
12⅞	4¾	1,100	9¼	8⅝	8½	Lone Star Gas	(sh)	5,000,000	N.P.	16cQ‡	3-31-33	55⅞	19⅝	25	5½	11	3⅜
6½	2⅛	700	4⅞	4½	5½	Memphis Natural Gas	(sh)	920,000	N.P.	....	4-15-32	22¼	7½	12⅛	4½	5¼	1⅝
5	2	No sales	..	..	..	Mexico-Ohio Oil Co.		500,000	N.P.	....	.....	7½	1¾	4⅝	1½	3⅝	1½
1¼	¼	100	¼	¼	..	Mountain & Gulf		$4,000,000	$1	....	4-15-31	⅝	⅜	½	⅛	⅜	⅛
6½	2½	2,100	5¾	5½	5⅝	Mountain Producers		$1,682,182	$10	20cQ	4- 1-33	12½	3¾	5⅞	2	4¾	2¼
20	10	900	15⅞	15	..	National Fuel Gas	(sh)	3,810,183	N.P.	25cQ	1-16-33	41⅝	19⅞	26½	9¾	14⅝	8
1⅝	½	1,800	1½	1⅜	1⅝	New Bradford Oil		$7,224,186	$5	....	4-15-31	3½	1⅛	1½	½	⅞	⅜
1⅞	½	No sales	..	..	..	New Mexico and Arizona		$1,000,000	$1	....	.....	7¼	1½	3	⅝	1¼	⅜
5	½	100	2½	2½	..	North Central Texas	(sh)	262,446	$5	....	9- 2-30	11¼	2⅛	3¼	⅝	1½	⅝
½	⅛	100	⅛	⅛	..	North European Oil	(sh)	1,372,391	N.P.	....	.....	6¼	⅝	2⅛	¼	⅝	⅛
7½	3	700	6½	6⅛	..	Pacific Western Oil	(sh)	1,000,000	N.P.	....	.....	19½	5½	15	2⅞	8	3
1⅞	⅛	1,600	1	⅞	..	Reiter-Foster	(sh)	388,584	N.P.	....	12- 2-29	5⅝	1	3⅛	¼	½	⅛
2¼	¼	1,300	1⅛	⅞	..	Richfield Oil pfd. x.w.	(sh)	399,950	$25	....	.....	23½	6½	11	⅛	1	⅛
4¼	⅝	600	2½	2	2¼	Ryan Consolidated	(sh)	296,931	N.P.	....	.....	8⅝	2	3	⅝	2½	⅝
1	⅝	100	⅝	⅝	..	Salt Creek Consolidated	(sh)	1,286,300	$10	....	4- 1-31	2½	½	1⅜	⅛	⅞	⅛
9¼	3½	1,500	6⅞	6¼	..	Salt Creek Producers	(sh)	1,496,859	$10	25c	2- 1-33	15¼	5¼	7⅜	2¾	5½	2⅜
1½	¼	300	1⅛	1⅛	1	Sunray Oil	(sh)	1,163,185	$5	....	4-15-31	10	2	5¼	¼	⅝	¼
13	6¼	800	9	8¼	8⅞	Texon Oil & Land	(sh)	936,036	N.P.	25cf	12-30-32	19½	8	12⅞	2½	10½	4½
1½	⅛	5,000	1¼	⅞	1⅛	Venezuelan Petroleum	(sh)	755,090	$5	....	2-15-30	4¼	⅝	1⅞	¼	⅛	⅛
3⅝	1½	900	3	2½	2½	Woodley Petroleum		$500,000	$1	....	3-31-29	5	½	3½	1⅛	2⅝	1⅛

*Ex-dividend. †Plus extra dividend of 25 cents. ‡Payable in stock. §Paid in lieu of regular cash dividend of 2 per cent.

months ended June 30 net loss of $640,295, as compared with loss of $750,845 in the corresponding period last year.

Shell Union Oil Corp. and subsidiaries reported for the six months ended June 30 net loss of $14,105,387, compared with net loss of $2,935,426 in the corresponding period last year.

Continental Oil Co. and subsidiaries reported for the six months ended June 30 net loss after all charges and reserves of $4,960,969, compared with loss after charges, but before taxes and dividends, of $156,502 in the corresponding period last year.

Phillips Petroleum Co. reported for the six months ended June 30 net loss of $5,324,588 after charges, compared with loss of $812,492 in the same period last year.

Union Oil Co. of California reported for the first six months of 1933 net profit of $200,000 after taxes and charges, equal to 5 cents a share, against net of $1,500,000, or 34 cents a share, in the like 1932 period.

Warner-Quinlan Co. reported for the first half of 1933 consolidated net loss of $662,800, after taxes and charges, compared with net loss of $761,580 in the first six months last year.

South Penn Oil Co. reported for the first half of 1933 net loss of $560,710 after taxes, depreciation, depletion, inventory adjustments, and other charges, but exclusive of $5,996 loss on sale of capital assets. This compares with net profit of $447,851, equal to 37 cents a share, in the first half of 1932.

Amerada Petroleum Corp. and subsidiaries reported for the first half of 1933 net loss of $510,033, against net income of $552,544 in the first six months last year.

Standard Oil Stocks on New York Curb

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended Sept. 2)

1933 High	1933 Low	Week ended Sept. 2 Sales	Week ended Sept. 2 High	Week ended Sept. 2 Low	Close Sept. 6	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1930 High	1930 Low	1931 High	1931 Low	1932 High	1932 Low
13	6	No sales	..	..	..	Borne Scrymser		$1,000,000	$25	....	10-15-30	25	11¼	16	6	7	6
39¾	25	No sales	..	..	..	Buckeye Pipe Line		$10,000,000	$50	75cQ	6-15-33	69	39⅞	56	30	35	17½
115	71	No sales	..	..	115	Chesebrough Mfg.		$3,000,000	$25	$1Q‡	6-29-33	184⅞	104¼	129½	75	90	53
8⅝	2¼	6,300	8½	7½	7⅞	Creole Petroleum	(sh)	6,974,356	$5	....	.....	7⅞	3	3⅞	1⅝	3⅛	1⅝
41¾	20	150	31¾	31¼	..	Eureka Pipe Line		$5,000,000	$100	$1Q	8- 1-33	54¾	26	36	19	35	18
88	40	9,400	86	80¼	83¼	Humble Oil & Refining		$74,365,725	$25	50cQ	7- 1-33	119	57¼	72	44¼	55	35⅝
15¼	6½	5,000	14⅛	13½	13½	Imperial Oil of Canada	(sh)	26,557,496	N.P.	12½cQ	9- 1-33	30	15	18¼	7⅜	10⅞	6¼
8	3⅛	No sales	..	..	..	Indiana Pipe Line		$3,000,000	$10	15c8.A.	5-15-33	41	14½	21⅛	5½	7½	2¾
19⅞	8⅞	23,800	19¼	17⅝	18½	International Petroleum	(sh)	14,247,088	N.P.	28cQ§	6-15-33	24	11⅜	15½	7⅜	12¼	8
10	5½	100	8¼	8¼	7⅞	National Transit		$6,362,500	$12.50	35c8.A.	6-15-33	22⅝	11½	17½	5	10½	6
6⅛	4¼	300	5	5	5½	Northern Pipe Line		$1,200,000	$10	25c	7- 1-33	54	26¼	35½	20	5½	3⅛
22⅛	11	4,200	17⅞	16⅜	18¼	South Penn Oil		$30,000,000	$25	25cQ	3-31-33	45⅞	16⅛	23⅞	9¼	16½	9⅝
6	2¾	No sales	..	..	..	Southern Pipe Line		$1,000,000	$10	10cQ	3- 1-33	20⅞	8⅜	17	7	10	3¾
43	24½	No sales	..	..	..	Southwest Pennsylvania Pipe Line		$1,750,000	$50	$1Q	7- 1-33	64	32	42½	25	37	27
33⅞	17	26,200	32⅜	29⅜	31¾	Standard Oil of Indiana	(sh)	15,941,895	$25	25cQ	6-15-33	59⅞	30	38½	13½	25⅛	13⅛
19¼	8⅜	3,900	17¼	16⅜	17¼	Standard Oil of Kentucky		$26,069,830	$10	25cQ	6-15-33	40½	18⅝	23⅝	12½	15⅞	8⅝
20½	11	300	17	17	..	Standard Oil of Nebraska		$4,770,550	$25	25cQ	9-20-33	48⅞	34⅝	36½	16	19	10¼
41	15½	500	34	32	..	Standard Oil of Ohio		$18,811,675	$25	37½cQ	1- 3-33	108½	43¼	62½	23	30⅛	15½
3	1	100	2⅛	2⅛	..	Swan-Finch Co.	(sh)	34,480	$25	....	1-15-29	10	4	4½	1	2	1⅝

*Ex-dividend. †Unit of trading less than 100 shares. ‡Plus 50 cents extra. §Payable in Canadian funds.

Transactions in Oil Shares on New York Stock Exchange

Quotations Compiled by Francis, Bro. & Co., Members of the New York Stock Exchange and Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended Sept. 2)

1933 High	1933 Low	Week ended Sept. 2 Sales	Week ended Sept. 2 High	Week ended Sept. 2 Low	Close Sept. 6	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1930 High	1930 Low	1931 High	1931 Low	1932 High	1932 Low
47	18½	79,900	47	40½	44	Amerada Corp.	(sh)	774,875	N.P.	50cQ	7-31-33	31½	16½	23	11¼	22¾	12
35½	6¾	270	30	26	29	Associated Oil		$34,356,180	$15	25cQ	.....	51	30	31	8¾	16½	6½
31⅞	12⅜	42,800	30⅝	28	29⅜	Atlantic Refining		$67,416,050	$25	25cQ	6-15-33	51⅜	16⅝	23⅝	8⅝	21⅞	8⅝
11	3	105,600	10¾	9	10½	Barnsdall Corp. A		$11,293,895	$5	....	5-11-31	34	8⅜	14½	4	7	3⅜
28⅛	9	59,400	20⅛	17⅜	18½	Columbia Gas & El.	(sh)	11,684,220	N.P.	20cQ§	5-15-33	87	30⅝	45⅝	11⅝	21	4¼
12	5¼	700	10⅝	10	..	Colonial Beacon Oil	(sh)	1,444,970	N.P.	....	12-22-22	20⅜	8⅜	10½	7½	12½	9
15¾	5	134,400	14⅞	12½	14½	Consolidated Oil Corp.	(sh)	14,218,835	N.P.	....	.....	..	..	..	..	9	4
19½	4⅞	100,100	19⅜	16¼	18¾	Continental Oil of Delaware	(sh)	4,738,593	$5	....	12-15-27	30½	7¾	12	5	9⅜	3⅝
43¼	13¾	9,500	39⅝	38⅛	38	General American Transportation		751,638	N.P.	25cQ	1- 2-33	111⅞	53⅛	73⅛	28	35¾	9½
27	4⅝	17,100	23¼	20¾	21½	General Asphalt	(sh)	413,333	$10	....	6-15-32	71½	22⅜	47	9⅝	15½	4⅝
38	8¼	16,000	32⅞	27½	30⅞	Houston Oil		$24,968,600	$100	....	10-17-30	116⅞	29¼	68½	15¾	28¼	8¾
4½	1⅛	300	3¼	3	..	Indian Refining		$12,564,070	$10	....	10- 1-30	17	2	4⅝	1⅛	2⅝	1
4	⅝	900	3	2⅜	3	Louisiana Oil Refining	(sh)	1,309,069	N.P.	....	.....	12	3½	4½	1	2¼	½
4	½	1,800	3½	2⅜	3	Maracaibo Oil	(sh)	330,000	N.P.	....	.....	10⅜	1⅜	3¾	½	1½	⅜
16	3¾	30,000	15½	13	14⅜	Mid-Continent Petroleum	(sh)	1,857,912	N.P.	....	2-16-31	32	11	16¾	5	8⅛	3¾
28⅝	4	2,000	18	16½	17	National Supply of Delaware	(sh)	390,879	$25	....	5-15-31	124¾	60	70¼	5	13	3½
17⅝	4⅜	70,000	16⅜	13½	15⅝	Ohio Oil	(sh)	6,562,005	N.P.	....	12-15-32	32	16	19½	5⅛	11	5
14	8	300	9⅞	9⅞	..	Pan American P. & T.	(sh)	3,416,082	$5	....	3-15-33	46½	42	35½	20	14	6
4¼	⅜	1,100	2¼	1⅞	2⅛	Panhandle P. & R.	(sh)	198,770	N.P.	....	.....	12¾	1¾	4¼	⅝	1¼	⅛
17⅞	4⅜	66,500	17¼	15	17	Phillips Petroleum	(sh)	4,156,908	N.P.	....	1- 2-31	44⅝	11½	16⅝	4	8⅛	2
1⅞	¼	5,900	1⅛	1	1	Pierce Oil Corp.		$29,622,831	$25	....	.....	2½	½	1½	¼	⅝	⅛
2¾	⅝	5,200	2⅛	1⅞	2	Pierce Petroleum	(sh)	2,500,000	N.P.	....	2-16-31	7⅛	1⅛	3⅜	½	1⅝	½
17⅝	6¾	38,800	16⅞	13¾	16¼	Plymouth Oil Co.	(sh)	1,050,000	$5	75cA	.....	..	..	..	..	12½	8½
15½	5⅝	No sales	..	..	..	Prairie Oil & Gas		$61,035,800	$25	....	3-31-31	54	11¼	20⅝	4½	9½	3½
22	7	No sales	..	..	..	Prairie Pipe Line		$101,250,000	$25	....	6-30-31	60	16⅝	26½	5⅞	12¼	5½
2⅞	¼	8,500	1⅞	1¼	1½	Producers & Refiners		$37,438,950	$50	....	9-15-23	11⅞	1	6	1	1⅝	⅛
13	3	1,200	9½	7⅛	8¼	Producers & Refiners pfd.		$2,845,350	$50	....	5- 4-25	40	11½	16	3	9¾	1
11⅞	2½	64,900	11¾	9⅜	11½	Pure Oil		$75,959,250	$25	....	9- 1-30	27¼	7⅝	11⅞	3¼	6½	2⅞
36⅜	17⅝	2,900	36	33¼	34⅜	Royal Dutch Am.	(sh)	611,303	....	80½c†	8- 5-32	56½	36⅞	42⅝	13	23¾	12⅛
33⅞	15	21,300	31⅜	26½	30¼	Seaboard Oil of Delaware	(sh)	1,204,460	$4	15cQ	9-15-33	37	9¾	20¾	5½	20⅜	6⅝
24¾	11¼	No sales	..	..	..	Shell Transport & Trading Co.		£23,985,000	£1	53c†	7-22-32	48⅜	26	34	5	16⅜	8
11⅝	4	24,100	9¾	8½	9⅜	Shell Union Oil	(sh)	13,066,497	N.P.	....	6-30-30	25½	5¼	10¼	2½	8⅜	2½
61	28½	300	57	55¾	51	Shell Union Oil pfd.	(sh)	400,000	$100	....	7- 1-31	106¼	55	78	15	65¼	18
12⅜	4⅞	3,200	11½	9⅝	10⅞	Simms Petroleum	(sh)	600,000	$20	25cQ	1-16-32	37	5⅝	11	3½	7½	3¼
9⅞	3	5,000	9	8	9	Skelly Oil		$27,441,250	$25	....	12-15-30	12	10⅛	12⅞	2	5⅜	2½
57½	22	300	55	55	..	Skelly Oil pfd.	(sh)	119,800	$100	....	5- 1-31	99¾	42	62	10	33½	12
15½	6	86,000	13¾	12⅛	13⅜	Socony-Vacuum		$792,711,738	$25	....	3-15-33	106⅝	98	106	87⅛	12¼	5¼
102	92½	200	102	101⅜	..	Standard Oil Export pfd.	(sh)	764,885	$100	$2.50SA.	12-31-32	..	..	21	8⅜	100½	81
41¼	19½	46,700	41¼	37¾	40	Standard Oil of California	(sh)	13,102,900	N.P.	25cQ	6-15-33	75	42½	51¾	23⅛	31⅞	15⅛
26¼	12¾	2,400	26	22¾	27	Standard Oil of Kansas		$8,000,000	$25	....	3-16-31	49	14⅜	19	7¾	16½	7
41⅜	22¾	67,400	41⅝	38⅞	40⅞	Standard Oil of New Jersey		$637,961,700	$25	50c8A	6-15-33	84⅞	32½	52½	26	37⅜	19⅞
50	35	400	47	43	..	Sun Oil	(sh)	1,531,422	N.P.	25cQ	6-15-33	70	39	45¼	26¾	39⅞	24⅜
4½	¾	14,200	3¼	2¾	3¼	Superior Oil Corp.	(sh)	776,979	N.P.	....	12-20-30	9⅜	⅜	1⅜	¼	2	¼
28⅝	10¾	44,700	27¾	24⅜	27½	The Texas Corporation		$246,204,900	$25	25cQ	7- 1-33	60½	28¼	36¼	9⅞	18¼	9¼
6½	1⅜	8,600	5	4⅜	4⅝	Texas Pacific Coal & Oil Co.		$9,304,890	$10	....	12-31-29	14½	4	6½	1⅞	4	1½
18	9¼	100	18	18	..	Tide Water Oil	(sh)	2,190,323	N.P.	....	12-31-32	31	13	18	9⅞	10	5
68	45	200	65	65	67	Tide Water Oil pfd.	(sh)	199,446	N.P.	....	2-15-33	94⅞	71	83	30	62	30
10¾	3⅛	63,700	10¼	9¼	9⅞	Tide Water Associated	(sh)	5,611,100	N.P.	....	2-16-31	17¾	5⅛	9	2⅛	5⅜	2
55	23½	900	53	40	52⅜	Tide Water Associated pfd.		$73,284,500	....	....	1- 1-33	89¾	55	68	20½	60	20
23⅜	8½	14,800	22	19¾	21	Union Oil of California	(sh)	4,386,070	$25	25cQ	8-10-33	50	10⅛	26⅝	11	15⅜	8
22¾	10½	2,700	20⅜	18½	17¾	Union Tank Car	(sh)	1,254,048	N.P.	30cQ	6- 1-33	38½	23	25⅛	16	19¼	11⅜
4⅞	⅝	3,000	3	2½	2⅞	Warner-Quinlan	(sh)	632,948	N.P.	....	7- 1-30	27	4¼	7⅝	⅞	2¼	½
5½	2	2,300	3⅞	3¼	3⅝	Wilcox Oil & Gas	(sh)	428,967	$5	...	5-10-28	21	6½	9⅝	2¾	8¾	2¾

*Ex-dividend. †Interim dividend for 1931. §Payable in 5% convertible preferred stock. A—Paid this year; no regular rate.

In comparing highs and lows for the several years in the three tables, it will be necessary to take into consideration cases where there have been stock split-ups.

NEW AND IMPROVED EQUIPMENT

Tagliabue Announces New 5-Inch Dial Thermometer

C. J. Tagliabue Manufacturing Co., Park and Nostrand Avenues, Brooklyn, N. Y., announces a new 5-inch dial indi-

cating thermometer in a black bakelite case. This instrument was developed for equipment manufacturers who demand a moderately priced dial thermometer that stands up under severe operating conditions.

The new Tag dial thermometer has an exceptionally powerful moving element or bellows suited to certain commonly used vapor tension ranges between minus 40° and plus 335° F. The indicating pointer is actuated by the motion of a bronze bellows which expands and contracts at the slightest temperature change at the bulb. This powerful motion is transmitted directly to the pointer by a new vibration-proof connecting mechanism.

Strikingly neat in appearance, the black bakelite case serves as a contrast for the large clean-cut white numerals of the jet black 5-inch dial. With the instrument case mounted at a convenient distance to face the operators, the pointer of the Tag dial indicating thermometer can be read as easily as the hands of a clock.

CIRCULAR MUTIFUELS BURNER

The Babcock & Wilcox Co., 85 Liberty Street, New York, has developed a burner adapted to combination firing through refractory burner walls and consequently suited to small and moderate size industrial boiler units. The burner, of the horisontal turbulent type, combines the features of the B.&W. circuler burner and the B.&W. mechanical atomizing oil burner, together with such additions as are necessary for the efficient burning of gas. Liquid, gaseous or solid fuels in pulverized form may be injected into the furnace through a common circular throat opening, either one at a time, or in combination. The adjustable deflector, mounted at the furnace end of the primary air and pulverized coal pipe, insures intimate mixing with the secondary air and furnishes a high degree of turbulence.

FACTORY AGENT FOR FISHER

The M. N. Dannenbaum Co., 304 Shell Building, Houston, Tex., has been made direct factory representative in southern and eastern Texas for the Fisher Governor Co., Marshalltown, Iowa, manufacturer of pump governors, pressure regulators, steam traps, liquid level controllers and strainers.

The Ingersoll-Rand Co., 11 Broadway, New York, has issued a new catalog, entitled "Portable Compressors, Tools and Equipment," designed to assist all users of compressed air. It describes and illustrates machines and tools that have many applications, and lists the types of work for which each is particularly fitted.

Among the Equipment Houses

The Superheater Co., New York, has appointed William T. Conlon, manager of its industrial department in charge of the design, manufacture and sale of Elesco superheaters for all types and makes of boilers for public utility and industrial power plants.

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In his engineering consulting capacity with the Harnischfeger Corp., of Milwaukee, Wis., Klaus L. Hansen flies from city to city in his schedule of welding promotion. His newly developed arc torch, designed for brazing nonferrous metals, can be operated from a standard arc welder generator.

The General Electric Co. and all its subsidiary companies in the United States have been licensed by the Dardelet Threadlock Corp. to manufacture for their own use bolts, nuts, and other threaded parts threaded with the Dardelet self-locking screw thread.

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William T. Conlon has been appointed manager of the industrial department of the Superheater Co., New York. He will have charge of the design, manufacture and sale of Elesco superheaters for all types and makes of boilers for public utility and industrial power plants. Mr. Conlon had been serving the company in an executive sales capacity.

Shutoff Valve Said to Be Quick, Positive and Safe

A new idea in shutoff valves is presented by C. B. Hunt & Son, Salem, Ohio, in their Quick-as-Wink, which the manufacturers say can be operated as quickly, positively and safely as turning on an electric light.

The Quick-as-Wink valve is characterized as a natural follower of the company's perfected Quick-as-Wink free-swiveling, leak-proof hose coupling. For more than a year this new valve has been made and tested on the block and on the job, and users are quoted as saying it is a great improvement affecting the use of compressed air.

Like Quick-as-Wink couplings, this valve uses the air pressure to effect the seal. The "U" leather packings are pressure seated by the air itself. The higher the pressure, the tighter the seal.

Wherever air is used under pressure Quick-as-Wink valves are said to have a place.

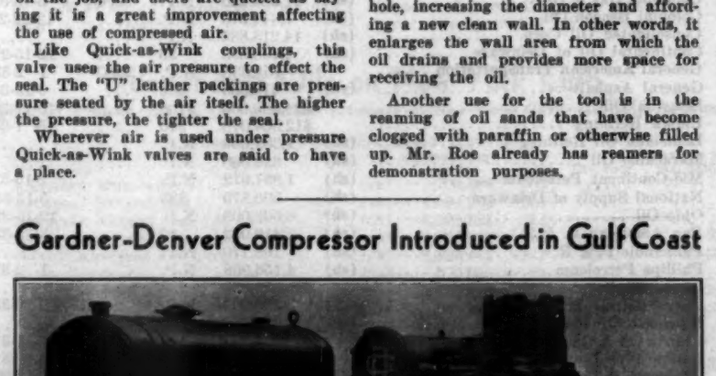
New Reamer Works in Any Hole That Admits Its Body

An underreamer invented by E. J. Roe, 853 North St. Francis Street, Wichita, Kans., and, he says, soon to be placed on the market by him, will go to work in any size hole through which the body of the reamer will pass, requiring no additional room for expansion.

One inch of the wall surface may be removed at a time and five such 1-inch operations may be performed in each hole, increasing the diameter and affording a new clean wall. In other words, it enlarges the wall area from which the oil drains and provides more space for receiving the oil.

Another use for the tool is in the reaming of oil sands that have become clogged with paraffin or otherwise filled up. Mr. Roe already has reamers for demonstration purposes.

Gardner-Denver Compressor Introduced in Gulf Coast



The accompanying illustration shows a Gardner-Denver two-stage 5½x2½x5 compressor made by the Gardner-Denver Co., Quincy, Ill. It has a capacity of 60 cubic feet and 600 pounds per square inch maximum working pressure, V-belt connected to a Buda 4-cylinder, heavy-duty natural gas engine. These air-lift pumping units are being introduced in the Gulf Coast oil fields. They are available in a wide range of sizes to meet a variety of capacity and pressure requirements.

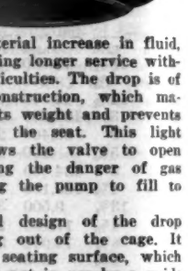
Hause Valve Co. Develops Devices for the Oil Field

The Hause Valve Co., of Wichita, Kans., is offering two products new to the oil industry. One is a drop seat, which is said to have proved its ability

to produce a material increase in fluid, in addition to giving longer service without operating difficulties. The drop is of sealed, hollow construction, which materially reduces its weight and prevents pounding out of the seat. This light weight also allows the valve to open quickly, decreasing the danger of gas lock and allowing the pump to fill to its full capacity.

The cylindrical design of the drop prevents spinning out of the cage. It has a reversible seating surface, which is protected when not in use by a guide on the end of the drop.

The second new product is the Hause cage. Principal among its new features are the rod wrench square, which permits the operator to use a sucker rod wrench on this square, thus doing away with the possibility of injuring the wings of the cage.



This cage is drop forged from the finest chrome nickel alloy steel, scientifically heat treated, insuring uniformity of texture and high tensile strength.

The Hause cage is threaded to fit A.P.I. thread specifications, but bored to fit A.P.I. ball size closely, thereby guiding travel directly over the seat, and causing quicker seating action.

Both of these new products are being sold through the Drillers Supply Co. of Wichita and its branches throughout the active oil fields.

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The rates for Classified Advertisements are 35 cents a line for the first insertion and 25 cents a line for each additional insertion. The following table will enable you to figure the cost of your advertisement:

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6 lines	2.10	3.60	5.10	6.60
7 lines	2.45	4.20	5.95	7.70
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10 lines	3.50	6.00	8.50	11.00

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For rates on Classified DISPLAY see opposite column.

Mail your Classified Advertisement to THE OIL AND GAS JOURNAL Tulsa, Oklahoma.

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25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor. Six-inch Oster Pipe Threading Machine. Also, large stock of lathes, pipe machines, milling machines, etc. Send for our list. Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio.

55,000 OR 66,000-BBL. TANKS
Will move and re-erect on your grade one or more steel roof storage tanks, practically new, anywhere in United States at great saving. If you have crude oil, fuel oil, gas oil or gasoline we can build the storage.
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64 North Second St., Kansas City, Kans.

Interested in Purchasing Pipe Lines, Refinery Equipment, and waste material or what have you.

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ONE 165 H.P. Type 10 Bessemer Direct Driven Compressor in good running condition. Also 2 spare power cylinders. Bargain. Nolan Sales Corp., Tulsa.

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50 Insulated 8,000 gallons, clean tank cars. General American make.
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Tulsa, Oklahoma.

Oil Industry Printing

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Chemists

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Royalties—Production

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PERPETUAL DEEDED ROYALTIES
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for dealers a specialty.
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Chester Imes,
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Oklahoma City, Okla.

CHOICE INCOME OIL ROYALTIES. Kansas and Oklahoma, for investors and dealers. J. L. HANER, 105 McKibbin Bldg., Muskogee, Okla.

ROYALTIES FOR INVESTMENT
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PRODUCING OIL ROYALTIES
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Send your ad today. Then it will be read and re-read by men who have not only the inclination, but also the means to put over big deals quickly.

THE OIL AND GAS JOURNAL
Classified Department
TULSA, OKLAHOMA

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The rate for Classified Display Advertising set in similar style to this Ad or in two-Column style is as follows for each insertion:

1 inch	1 time	.....$5.00
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Rates for Classified without display shown on opposite column.

One point borders and ten point capitals are allowed, larger type not accepted.

Changes in copy must be in our office 10 days in advance of publication date.

Mail your advertisement to the Largest Classified Section in the Oil Industry.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma.

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INCORPORATE YOUR BUSINESS. Delaware laws. Many advantages. Low cost. Write today. Free advisory service. CORPORATION FISCAL COMPANY, INC., Wilmington, Delaware.

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DELAWARE CHARTERS—Fees small, free forms, CHAS. G. GUYER, 901 Market St., Wilmington, Del.

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REFINERY SUPERINTENDENT and CHEMIST, ten years complete plant experience. Technical training. Available at once. Write Box F-770, The Oil and Gas Journal, Tulsa, Okla.

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